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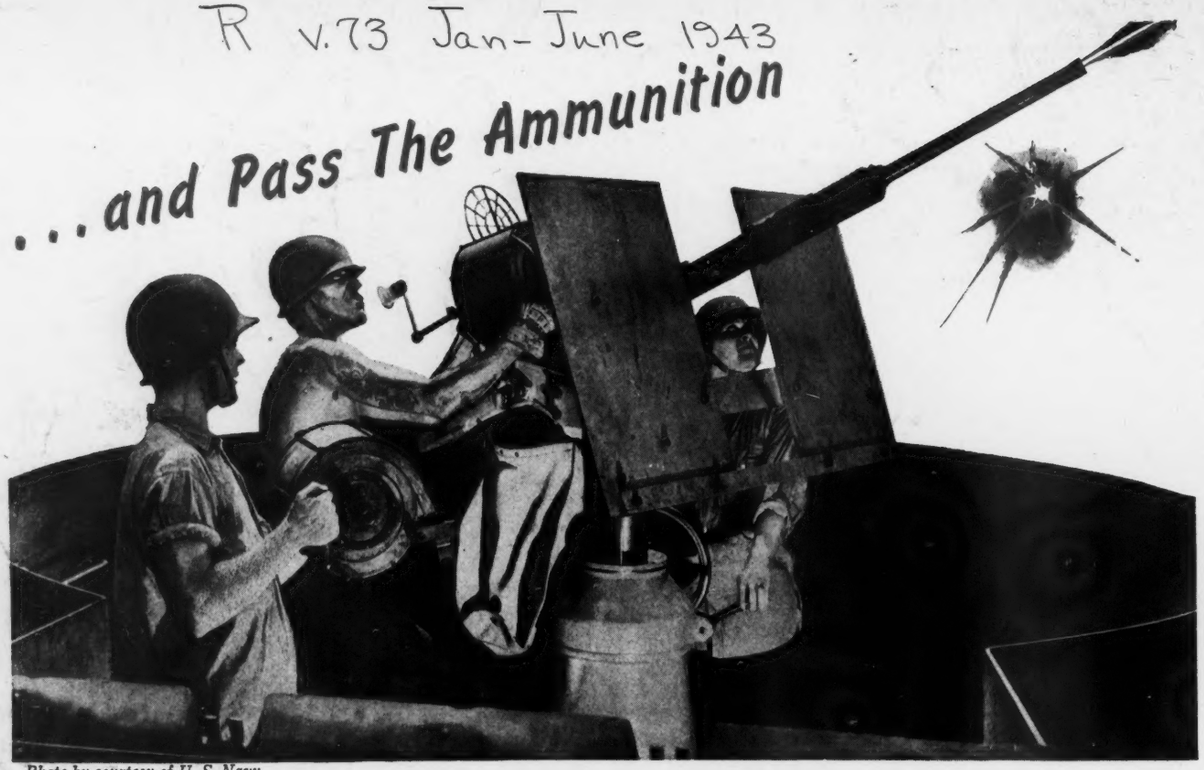
VIVA DINGHY SAILING! . . . . . *By Samuel Wetherill*
REPRESENTATIVE SMALL WAR CRAFT . . . . . *Navy, Coast Guard, Army*
GADGETS & GILHICKIES . . . . . WATERFRONT NEWS

R v.73 Jan-June 1943

. . . and Pass The Ammunition



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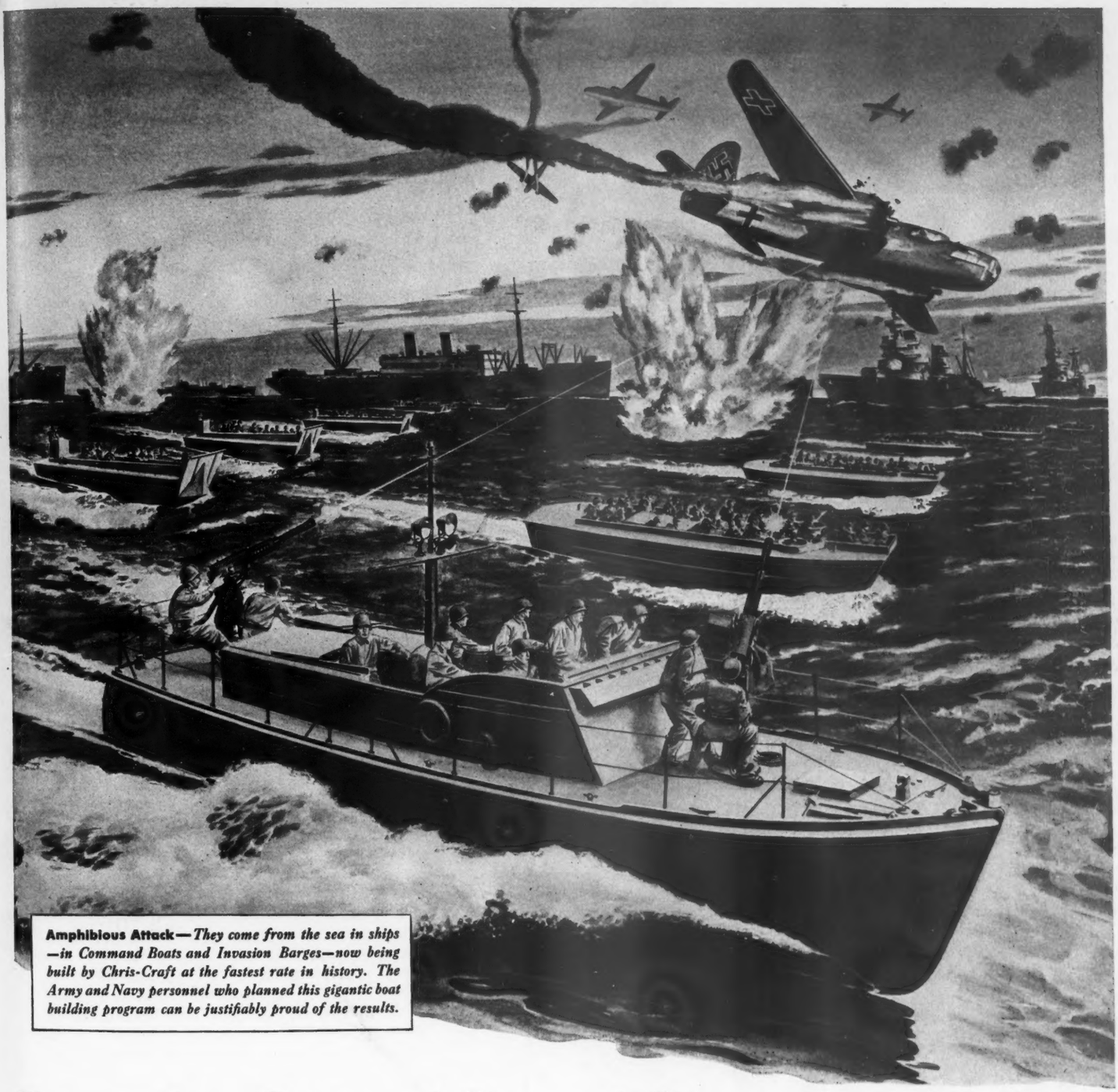

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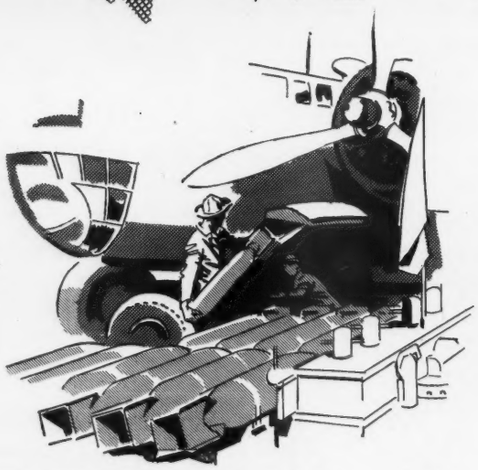

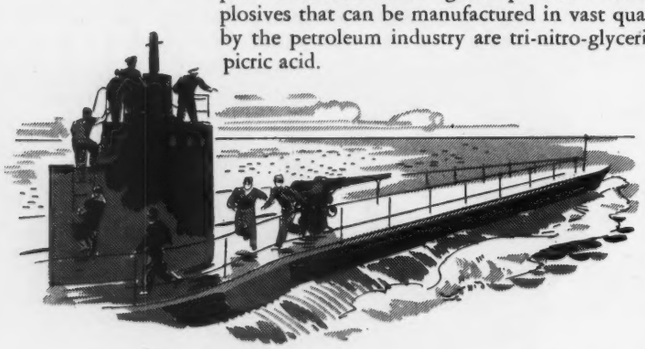

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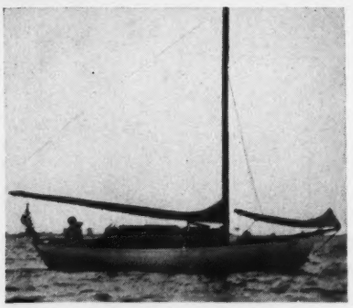

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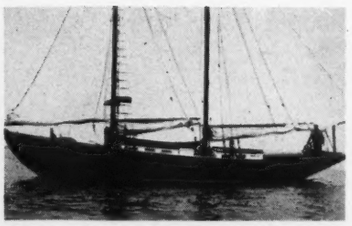

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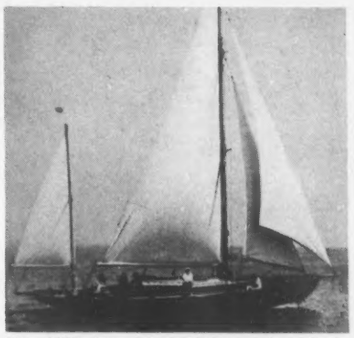

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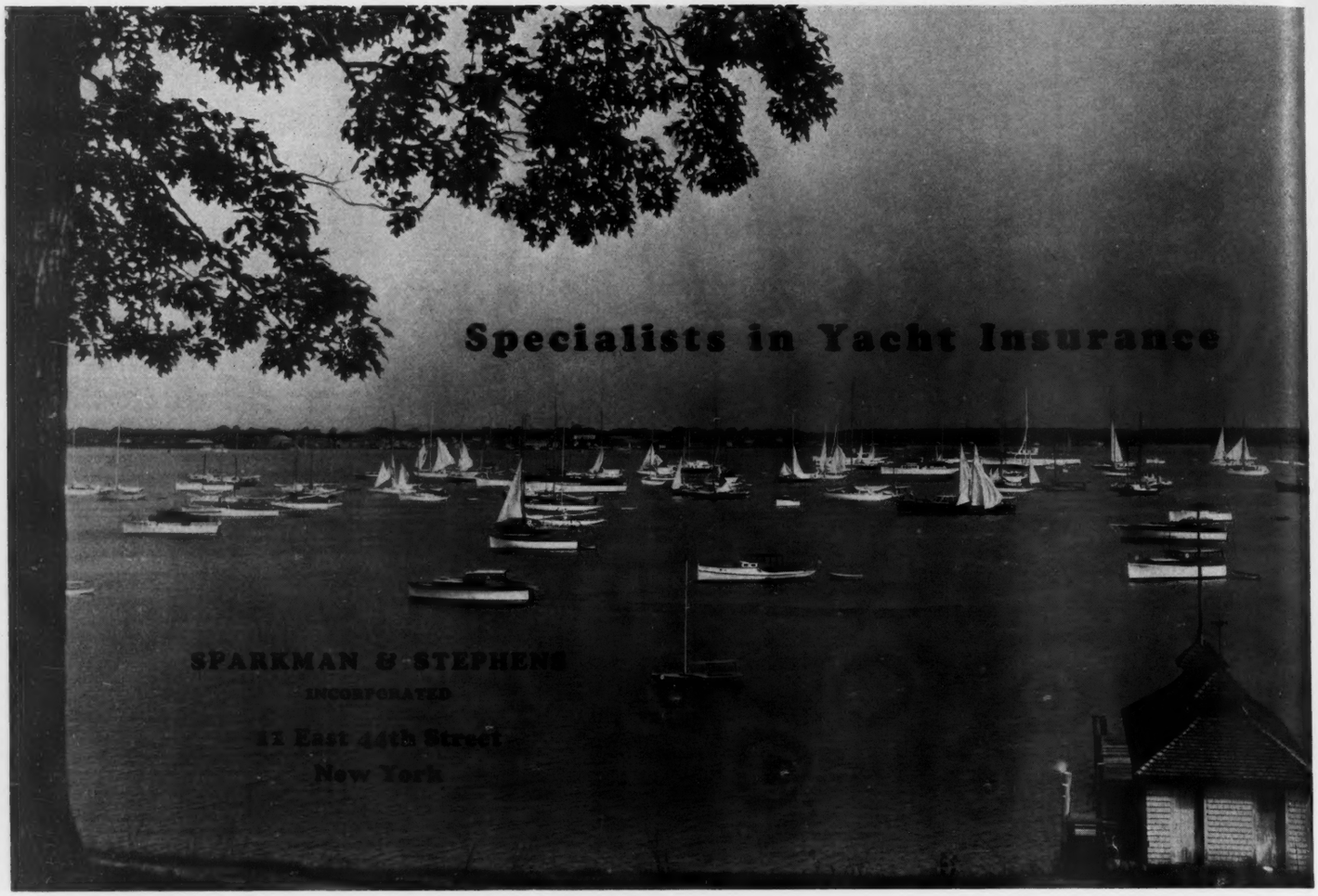

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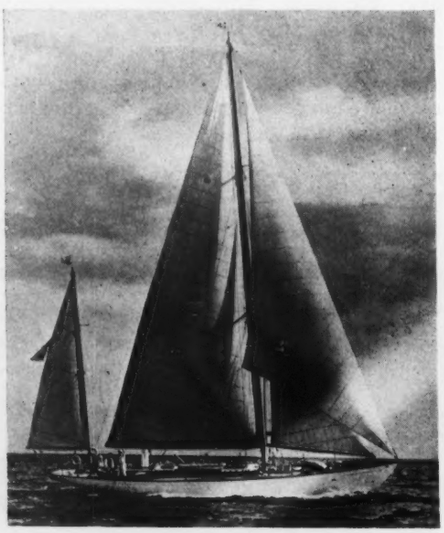

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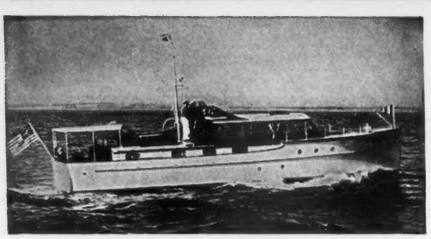

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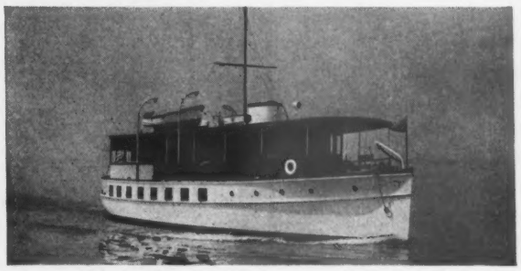

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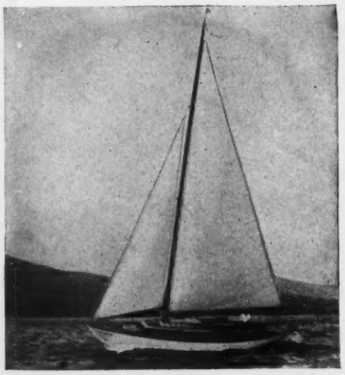

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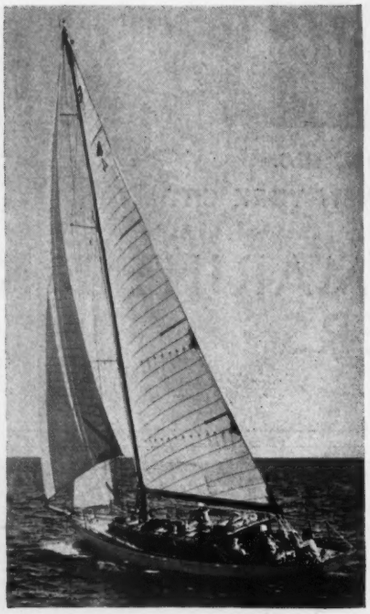

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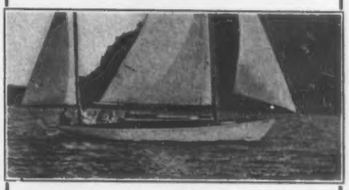

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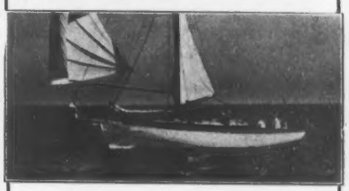

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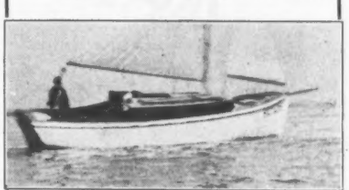

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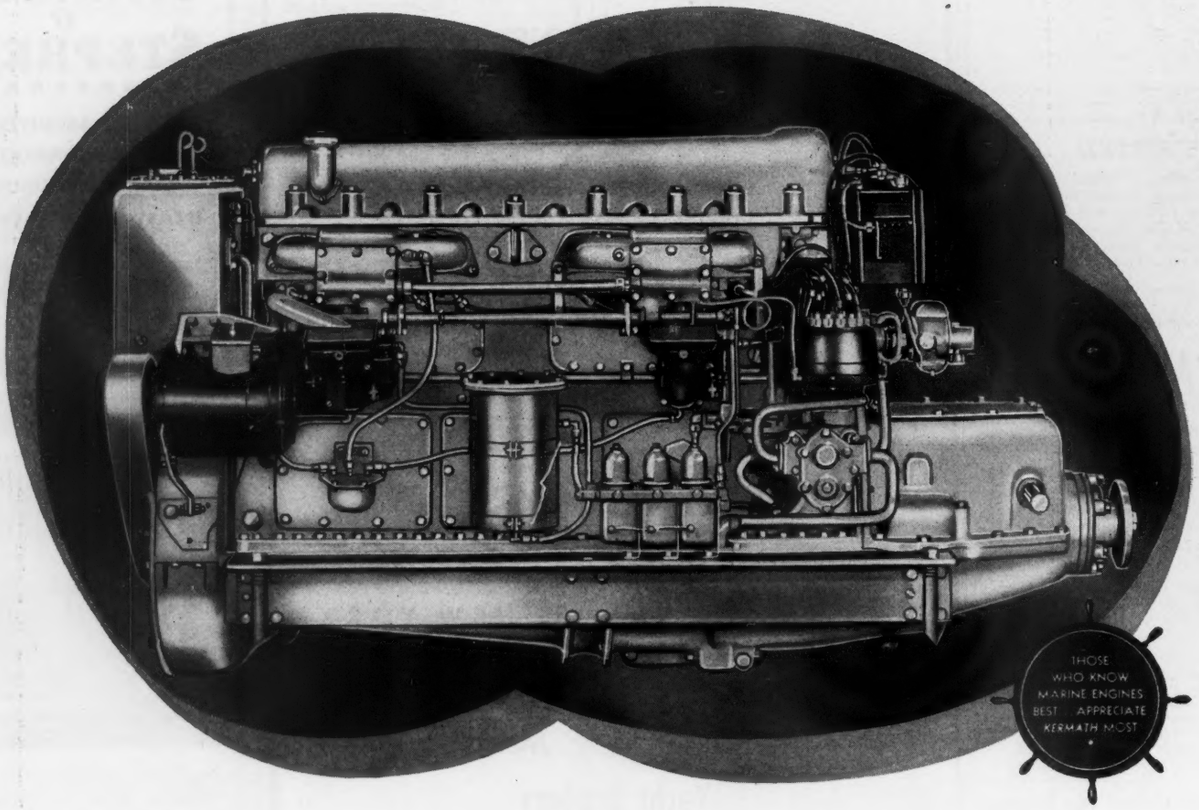

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VOL. LXXIII
NO. 1

YACHTING

JANUARY
1943

Rendezvous with Hirohito! An American battleship and an accompanying destroyer drive through a Pacific gale in search of the enemy. From an etching by Ernest Shoure Thompson

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YACHT CLUB NEWS AND COMMENT

THE COAST GUARD'S CORSAIR FLEET

▶ The Coast Guard personnel procurement officer of the First Naval District (1300 Custom House, Boston, Massachusetts) has recently announced openings for petty officer ratings in the District's Corsair Fleet. Applicants should be between the ages of 17 and 55 and should know how to handle sailing craft. Ratings as petty officers are also open for automobile mechanics, Diesel and gasoline engine mechanics, radio technicians and holders of "ham" licences. Waivers for certain physical disabilities will be granted to men who otherwise meet the requirements, Lieut. Downing stated. Ratings will be based on experience.

The "Corsair Fleet" is similar to the offshore picket patrol conducted at Greenport, Long Island and elsewhere. The designation "Corsair" came about in an unusual manner. One of the crew of a coastal picket vessel wrote a sea chanty entitled "The Corsair Chanty"; the name caught the fancy of the men in that particular service, and has stuck ever since.

▶ Of particular interest to ship lovers everywhere is the knowledge that the famous Gloucester fishing schooner *Gertrude L. Thebaud* has been taken over by the Coast Guard and appointed flagship of this new sailing fleet.

A MODEL REPORT

▶ The annual report of the Corinthian Y.C. of Washington, D. C., submitted by the secretary, L. W. Walker, gives a good picture of the affairs and condition of that organization, told with a few welcome touches of humor. He begins: "This Annual Report represents many hours of laborious preparation over long periods of time and is intended to clarify the picture to you as to where you came from, where you are, and whither you are going — that is, if you care to know. . . . There has been no particular effort on my part to protect or advance your personal interests but rather an acceptance of each year as a challenge to be bettered, if possible.

"Over the years, the Club has been growing from a small, closely knit group of Yachtsmen, with a very limited plant, to a large group of disinterested boat owners, with a greatly expanded plant and exceptional service facilities — sometimes referred to as an exceptionally fine Boat Service Garage. . . .

"Further expansion, to you as a member, will sift down into your already depleted pocket book — more people on the grounds that you do not know, more junk under your feet, less time on the railway with some added revenue offset by greater operating costs."

Seriously, the report shows the club to be in a healthy condition, with membership increasing and its activities continuing.

"THEBAUD" JOINS THE COAST GUARD

▶ Captain Ben Pine, of Gloucester, owner and former racing skipper of the famous fishing schooner *Gertrude L. Thebaud*, has turned her over to the Coast Guard and, on December 13th, she became the flagship of the Corsair Fleet of the Coast Guard's First Naval District which patrols offshore.

She was built at Essex, Mass., in 1930 from designs by Frank C. Paine and twice represented the United States against the Nova Scotian *Bluenose*. She won her first series in 1930, something that the *Elsie*, *Henry Ford* and *Columbia* had all failed to do, though the Dennis Cup was not at stake in the 1930 series.

She has been completely overhauled, rerigged and fitted with new sails and has turned from the peaceful task of furnishing food for the American larder to the grim job of hunting U-boats off the coast.

"BLUENOSE" NOW A TRADER

▶ The fishing schooner *Bluenose*, of Lunenburg, Nova Scotia, has been sold to the West Indies Trading Co., of Halifax. Built in 1921 from designs by W. J. Roue, she sailed in five international fisherman's contests against Gloucester schooners, winning all except the one against the *Gertrude L. Thebaud* in 1930. Captain Angus Walters commanded her throughout her racing career and also took her to England and to Toronto on exhibition cruises.

THAT WASHINGTON FLOOD

▶ When the Potomac River went on a rampage last October, the water rose a foot higher than it had in 1936 and the Corinthian Yacht Club had rather a hectic time. The secretary says, in his annual report: "While the highest credit is due to those members and club employees who stood by to protect, salvage and police member and club property, it is believed that the services rendered by Corinthian Sea Scout Ship No 322 . . . rate something or other beyond plain recognition. Looking back, it was a four ring circus for four days — plenty of water, rain, grief and worry with enough laughs tucked in to keep going.

"Unquestionably the kids stole the show and Allen, with his mark of 'injured' and Veenstra, with a 'fall in twice,' appear to have hit the jackpot. . . . I was present at the injury to Allen — a dirty wallop on the coco too fast for the eye to see. He was putting a crew aboard the *Quien Sabe II* when, presto! he was standing on the dock in four feet of water with a canvas covered dinghy for a helmet. The steward took him in tow, patched him up and chased him home."

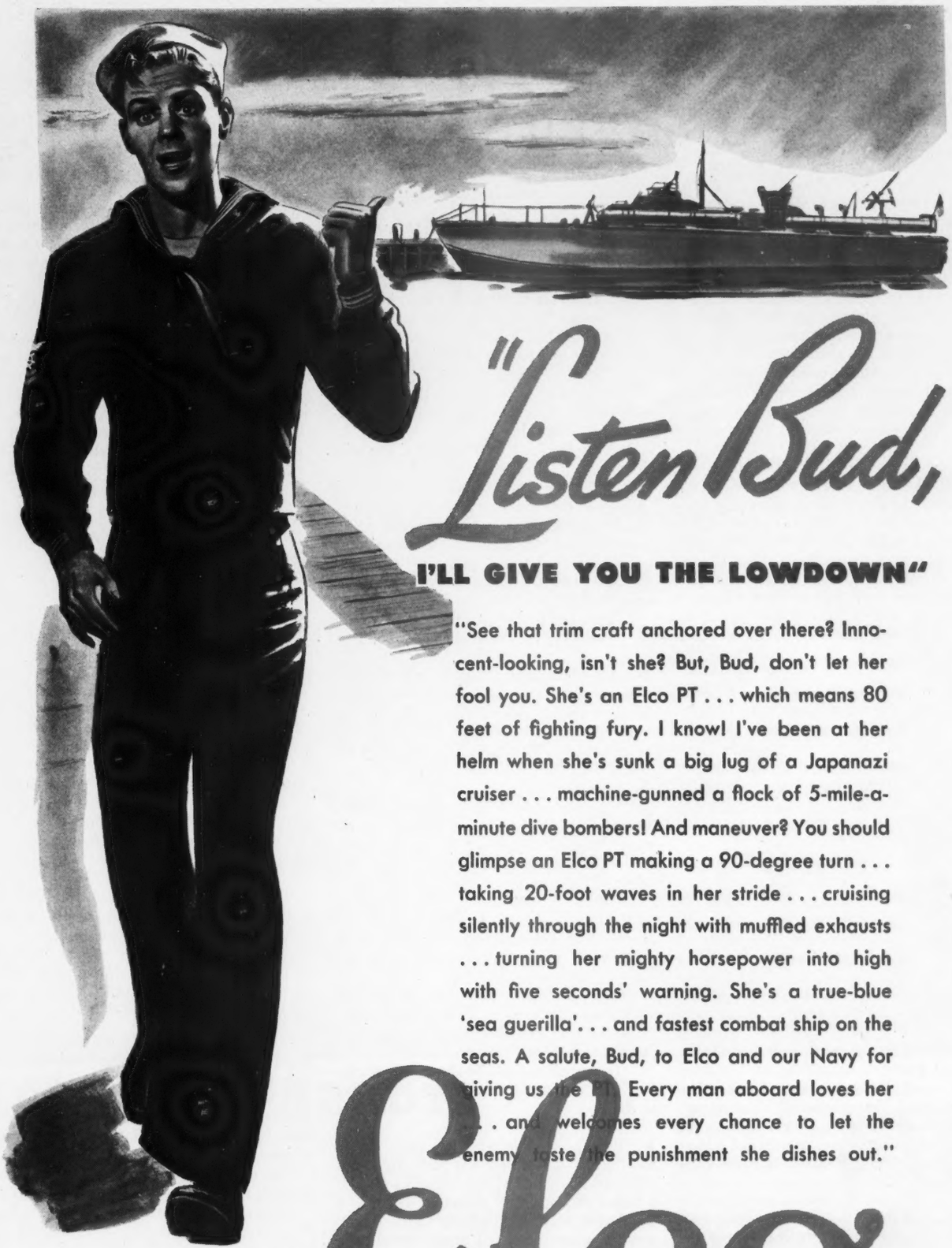
According to the extracts from their log, the Sea Scouts "Stood watch, rowed around in rain about club harbor and in channel checking lines and anchors. Tied up several dinks floating away. Replaced several lines broken at piles. Cleared three boats drifting away because of fouled anchors. Chased and salvaged many chests floating down stream. Tied ladders, boxes and dinks to trees on shore and to sea wall. Ferry service continually. . . . Aided in relocating many boats to safer berths. Aided in extinguishing lights of club property. Pumped several boats. Replaced lines and pushed boats into safe positions as tide dropped. Ferried and patrolled all night. . . . Cleaned mud from piers and clubhouse and policed grounds where possible. Salvaged cat boat equipment and helped organize club equipment. . . . General cleanup of piers and grounds as directed by steward and club officers."

The Scouts put in a total of 414 hours and the secretary of the club remarks: "Ten or twelve years ago, I was not so hot about Sea Scouts, but, looking back, it has proved to be a smart investment."

NEW OFFICERS FOR L.M.Y.A.

▶ At the annual meeting of the Lake Michigan Yachting Association, held in Chicago, the following officers were elected to serve in 1943: Commodore, Theo. M. Dunlap; vice commodore, sail yacht squadron, James Barr; vice commodore, power yacht squadron, L. T. Rountree; rear commodore, sail yacht squadron, E. W. Schnabel; rear commodore, power yacht squadron, Leon J. D. Healy; secretary, Edward Buker, Jr.; treasurer, David Root; judge advocate, Victor C. Milliken; secretary, sail yacht squadron, D. E. Hobelman; secretary, power yacht squadron, Warren Baunach. Directors, power yacht squadron: C. J. Peterson, D. P. Ruger, Lieut. David Zimmerman and Oscar Haase; directors, sail yacht squadron, Robert P. Benedict, James Blackwood, John J. Mitchell and John T. Snite.

These gentlemen were chosen as delegates to the Yacht Racing Union of the Great Lakes: Victor C. Milliken, Malcolm D. Vail and Eldred Stephenson. Wells A. Lippincott is the delegate to the North American Yacht Racing Union.



"Listen Bud,

I'LL GIVE YOU THE LOWDOWN"

"See that trim craft anchored over there? Innocent-looking, isn't she? But, Bud, don't let her fool you. She's an Elco PT . . . which means 80 feet of fighting fury. I know! I've been at her helm when she's sunk a big lug of a Japanazi cruiser . . . machine-gunned a flock of 5-mile-a-minute dive bombers! And maneuver? You should glimpse an Elco PT making a 90-degree turn . . . taking 20-foot waves in her stride . . . cruising silently through the night with muffled exhausts . . . turning her mighty horsepower into high with five seconds' warning. She's a true-blue 'sea guerilla'. . . and fastest combat ship on the seas. A salute, Bud, to Elco and our Navy for giving us the PT. Every man aboard loves her . . . and welcomes every chance to let the enemy taste the punishment she dishes out."

Elco

ELCO NAVAL DIVISION OF THE ELECTRIC BOAT COMPANY

BAYONNE, N. J.

MOTOR TORPEDO BOATS • SUBMARINE CHASERS • NAVAL AUXILIARIES

Being a Department Designed for Preserving Unusual Tales Spun by Yarners at the End of the Day's Run When Everything Has Been Snugged Down

AROUND THE CABIN LAMP

▶ We were out on the Auxiliary's patrol and, at the time, lying to at their mooring guarding the mouth of our river. The time was 2:00 a.m., and the night as black as the inside of a billy goat.

Neither myself nor my friend Joe Haskell, the fisherman, who was my watch-mate, had spoken a word for some time. It was so quiet you could hear the slightest noises, like the rippling of the tide at our bows or, perhaps, the gentle snores of the watch off duty drifting up through the open hatch. It is funny how the darkness makes you listen so much harder.

Suddenly, we could hear a little humming, way off, like the buzz of a bee. It grew louder, and we could see two little lights way up in the heavens, one red, the other green, moving swiftly out to sea. The whole sky throbbed as the plane roared overhead. Then the two lights changed to a single white, which grew smaller as the droning grew softer. Finally, it was only a firefly's lantern 'way out in the dark. The plane had gone — where was it going?

▶ The stillness grew oppressive, so I said to Joe: "How is it you have no yarn tonight? Don't tell me your well has run dry of stories."

"Well," said he, and I could imagine how his eyes were twinkling, for they always do when he spins a yarn, "I was just thinkin'. Thinkin' of the time I almost solved the rubber problem."

"The which?" said I. "Did you say the rubber problem?"

"Yep, that's what I said. You see, my wife's uncle was one of them missionary fellers. Many a time I'd heard him tell of all the rubber raised down on them South Sea islands. So, when the Japs come tearin' along an' took 'em, I was one of the first to dope it out that pretty soon we wouldn't git no more tires.

"I figured there'd be a fortune in it for the guy that found a substitute, so I started lookin' round. I found no end of things like kelp an' weed, that was tough an' stretchy, but they had no bounce; they'd stretch, but they had no spring to 'em. Seemed like rubber was the only thing that would come back that-a-way.

▶ "Then one day I took the kids along with me when I went a-pullin' traps. It was low water, so I stopped at a bar on my way down river an' dug me a mess of clams. Later on, when I'd finished my string, we fetched up down to Cunner's Ledge. Here the kids wanted to try their luck fishin' so I shucked out a couple of clams for bait an' let 'em go to it.

"Well, the lines were scarcely over when up comes a sculpin.

"'You're fishin' on bottom,' I tells 'em.

"Then I showed 'em how to take the spliny little devil off the hook. 'Hold him belly up by the throat, this-a-way,' I said. 'And watch out for them horns on his back!'

"'Gee, ain't he a funny feller,' says my boy. 'Lookit, his belly's gittin' round like a ball. Looks like he's blowin' it up.'

"'Tickle it,' I said.

"So the kid tickled it an' the darn little sculpin puffed itself up like a balloon till you'd think its belly'd bust.

"'Now heave it overboard an' see what happens.'

"So the boy give it a heave, an' the sculpin floated around belly-up, its little fins a-wavin' in the air an' its little tail a-wigglin' in the water. Couldn't sink itself no more'n a kid in an old inner tube. But, in a minute, out goes the wind like a tire with a nail in it, an' in goes his little tummy.

"'Yah! Old rubber belly!' says the kid.

"'Yes,' says I, 'that's what they call 'em.'

Rubber Belly

▶ "All of a sudden I says to myself, 'Hey! What's the matter with that for rubber? Them bellies'll stretch an' shrink like nobody's business. Why the hell wouldn't they make rubber?' The more I thought about it, the better it looked. By jingo! It might pay me to look into it!

"Not sayin' nothin' to nobody, I took a few of them sculpins home. I had an old steam vulcanizing set out in the woodshed; in the old days, I used it to patch up the tires of the old Model T.

"Well, sir, I filled up the tank with gas an' lit the burner. Seemed like in no time I had steam on 'er. I skivered off a couple of pieces of belly an', when the plate got sizzlin' hot, clamped them together on it.

"I let 'em cook a while, then took 'em off. I tried to pull 'em apart with pliers. Could I do it? No, sir! You never seen no better job of vulcanizin' in all your born days.

"'Them bellies must be chuck full of rubber,' says I to myself, 'an' mighty fine rubber at that!'

▶ "But the trouble was that them bellies was thin; no doubt they was pure rubber but it'd take a boatload of 'em to build a tire. So I began experimentin' round to see what I could do to make 'em light an' fluffy. Bakin' powder, yeast, soda — I tried 'em all. No soap! I couldn't seem to do it, nohow.

"Then one day the wife up an' says, 'Hey, Joe, for pity sakes what's all this here smell a-floatin' round the place?'

"'What smell?' I said, innercent like.

"'Whew!' says she, a-holdin' on ter her nose, 'it smells to me like dead fish!'

"'Must be the wind a-blowin' from the glue factory,' I tells her, scairt stiff that my secret might git out.

"Then a funny thing happened. I'd no sooner said 'glue factory' thin I knew I had the answer to that there problem. I had an old can of marine glue on my work bench, an' there was a pile of sawdust under it. I poured in the glue an' dumped in the sawdust. Then I stirred it up good with a paddle. Boy, that broth got tough an' stringy as it boiled up blacker'n pitch.

"When the mess had cooled, out come the toughest, spongiest rubber that you ever seen in all your born days. You see, the sawdust give it bulk; the waterproof glue — which, as you know, is made so as not to harden in the seams — give it that stringy toughness; an' the bellies give it the old bounce. It was just a trifle smelly, perhaps, but who'd go a-smellin' his tires? But would it wear?

▶ "Well, to find this out, I took the spare tire off the flivver. It was all wore out an' showin' more canvas than a full-rigged ship. I fired up agin an', when the rubber was b'ilin' hot, I give that old shoe a bran' new retread. Did it look nifty? I'll say it did! You never seen a better job in all your born days.

"Thin I jacked up the starboard after wheel of Leapin' Lena. I put the retreaded spare on this here wheel because it was the one that was a-holdin'. The brake linin' wasn't so good on the other. Did I give that tire a beatin'! I'd git the flivver doin' forty, then I'd stand on the brake pedal. *E-E-E-e-e-e-eee!* That starboard rear would squeal like Aunt Hattie with a mouse in her bed. There'd be a mark on the road you could plant taters in — but could you put any wear on that tread? No, sir!

"I'd git me a million kids to catch me the sculpins. I'd pay 'em a penny apiece for each fish. That'd fetch me a billion a day. There was plenty of sawdust around an', if them glue companies tried to hold me up on price, why, with a little studyin', I could learn about cookin' dead horses myself.

▶ "It was time to go down an' see J. P. Boodle & Company. The financial end of it didn't worry me a mite. Didn't I know Mr. Boodle well? Sure I did. He was a bang up yachtsman an' I'd sold him lobsters many a time. I put on my store clothes an' bought me a ticket for New York.

"'How are you, Joe?' says old J. P. 'Make yourself right ter home. Have a cigar?'

"Well, I had a damn fine visit. We talked an' talked for hours. Git J. P. started on talkin' boats an' he'll never stop! Yes, he missed his yacht like blazes but she was right where she ought'er be, doin' her bit for Uncle Sam. Sure we'd lick the Japs; no doubt about it. As I said, we had one swell visit."

▶ "But how about the rubber?" I asked.

"*Er* — heck!" said he, and I could hear him snickering softly in the dark. "There was a shortage of fish hooks an' I couldn't put the kids to work. I never seen nothin' like it in all my born days."

CARTER FILLEBROWN

THEY WERE READY!

They make good gobs and Admirals, those men who used to sail for pleasure. The know-how of handling a boat, the know-where you stand and how to get where you want to go, come in pretty handy when you're set down suddenly in the middle of a hostile ocean. The seamanship they learned as sportsmen saved Uncle Sam a lot of training time.

Up and down the coasts, on the Atlantic and Pacific and Caribbean, America's seasoned yachtsmen are making their one-time hobby fight to make the sea free for fun again. The Coast Guard, the Navy, the Army, the Merchant Marine, welcomed these men of experience and daring. They know a man who cares enough about the sea to learn to sail it for pleasure, will handle his job with credit when the race is for keeps.

We knew that too. We haven't cared for so many of America's famous boats all these years without knowing real men when we see them. For instance:

THE OWNER OF THE BARUNA *and his three sons who formerly were racing this beautiful yacht to victory at Bermuda, are now chasing greater, grimmer prizes in undesignated waters. His boat is safe with us in his absence, and we feel safer because men like him are looking out for us in the battle for the sea.*

JAKOBSON SHIPYARD INC.

OYSTER BAY, NEW YORK

IN THE WIND

▶ *HAPPIER* NEW YEAR!! And how is *your* head this morning? . . .

▶ Joe Appleton, who has had to give up his exquisite model fashioning for the nonce so as to give the Navy the benefit of his knowledge of construction, took himself to Greenport a while back and reported to this compartment that he had seen a couple of well-known ocean racers looking trim but grim in their war paint. . . . Of course, he had a gam with our absent editorial staff member, Bud Smith, who has been carrying on so gallantly in those parts. . . .

▶ Before I was lucky enough to get abroad in the last war, I was in command of SC 20, basing in the York River where the Crab Fleet lay, protected by a couple of nets below and one above. . . . The fate of the guys aboard was pretty hard to take; most of them were straining at their moorings, crazy to see action and there wasn't a slim chance. . . . One day three officers were transferred to "active" duty in foreign waters. . . . Next morning the battlewagon from which they were liberated hoisted a service flag with three stars. . . .

▶ Of course there were some ships down there that supplemented the Crabs — the *Vermont, South Carolina, Michigan* among them — and they used to get under way every so often, breaking out of the ice-bound fastnesses of the bleak stream and taking to the high seas for a couple of weeks. . . . The luckless sub-chasers (most of them were fortunate to have two engines in operation) were supposed to convoy the battleships for a hundred miles or so and then return to the base. . . . A few of them made it some of the time — all of them tried hard and their crews, green as the seas that made them seasick, stuck at their stations with all the pluck in the world — but it was a tough life and I envied the comparatively luxurious life I'd led as a junior officer aboard the *Vermont* before I'd been transferred to my first command. . . .

▶ The only thing I can say for the York River and vicinity is that the oysters thereabouts are elegant. . . . When you got a look at Yorktown itself, you didn't wonder why Cornwallis surrendered. . . .

▶ Writes Lloyd H. Simson (Corinthian, Washington, D. C.):

Chuckling over Darrell McClure's cartoon masterpiece in the November issue of YACHTING, I was reminded of an interesting item in a recent number of *Science News Letter:*

"Lacking gasoline or motor cars, Chilean nitrate miners are now *sailing* on wheels to work and back; the desert wind, blowing east at dawn and west at sunset, fills the sails hoisted on their cars and wagons."

Since laying up the sloop for the winter and being painfully conscious of the limitations of an A-card, I too have toyed with the intriguing possibilities of a marconi rig on a 1936 Airflow Chrysler. . . . You see, we too enjoy consistently fair winds, the prevailing breeze in the morning being up the Potomac *toward* the Capitol; then, beginning at noon (when Congress is in session, particularly when in a filibustering mood), briskly blowing *away* from its declamatory dome. . . . At that, a forty-foot spar stepped through the roof of the old bus wouldn't be so impractical here in Washington; no overhead trolley or other wires and — need I say? — the channel is well marked. . . .

I wonder if Mr. Simson has ever read Robert Nathan's *The Enchanted Voyage.* . . . The hero of that fanciful tome is a kindred spirit. . . .

▶ *Social Note:* F. S. Pearson 2nd, yachtsman and bon vivant, was recently appointed editor of G. P. Putnam's Sons, which is interfering with his normal night life considerably. . . . F. S., who in the goode olde days was wont to cruise with Howard Hughes (it rhymes) had his last nautical adventure in Great South Bay when he was wrecked in a 12-footer with a brace of fair companions who had distracted his attention from his navigation, apparently. . . . The rescuing Coast Guard officer solemnly recorded Cap'n Pearson as "master" of the vessel in distress. . . .

▶ A young chap remarked the other day that he expected to be *indicted* in the service at any moment. . . .

▶ Alf Loomis, the mine sweeper extraordinary, was seen lunching on the Yale Club Roof in charming feminine society last month. . . . He's been doing a rattling good job, they tell me, but of course you remember the old adage about the *new broom.* . . .

▶ Writes a gallant sailor in the Coast Guard who used to crew for a skipper at Southampton:

"I am now in the *Madelon,* formerly *Illyria.* . . . She was built originally for Crane in 1928 somewhere in Italy. . . . She is an 147-foot over all, steel hull, hermaphrodite brig with auxiliary Diesel power. . . . She seems extremely well built and has made two circumnavigations of the globe for the Field Museum of Chicago. . . .

"We have been rigging and painting for weeks and shall probably be at it for a couple more. . . . When we get under way, I should get some real sailing experience including the handling of squaresails. . . ."

▶ Prominent restaurateur here in New York is Maurice Chovel who will be remembered by cosmopolitan yachtsmen as vice president of the Villefranche Yacht Club and owner of the de luxe yacht *Mavis.* . . . His favorite pastime was to take over the galley and prepare succulent dishes for his guests. . . .

▶ When Russel (*Pop*) Corey got to Quonsett Point for his *refresher* course, he discovered that his commanding officer had been junior to him in the last fracas. . . . He didn't mind that — but he was slighty upset when he discovered that the worst mark he got on his examination papers was in seamanship — and him a yacht owner for years, crack navigator and all-around sea dog! . . . (Also a member of the Cruising Club). . . .

▶ Lank Ford, who used to loan me his peajacket when we were cruising with George Townsend out of Greenwich (Lank takes along more clothes than any other guy I've ever been shipmates with), has been making some superlatively good pictures. . . .

▶ Harking back to Pearson, his Grandpa — F. S. Pearson I — owned *Coronet,* the first registered yacht to round the Horn (Fifty South to Fifty South stuff). . . . She previously had beaten "Colly" Colt's famed *Dauntless* in a transatlantic race. . . . *My* Pa was aboard *Dauntless* when Cap'n Colt ran her onto a shoal in Newport Harbor one fine afternoon after a gay day at sea. . . .

▶ Erland D. Debes contributes the following gem:

"Quincy, Mass., May 23 . . . Yachtsmen in this district ran up the sailing pennant to the forepeak today as Quincy, Wollaston and Squantum clubs engaged in keen competition in the season's opener . . ."

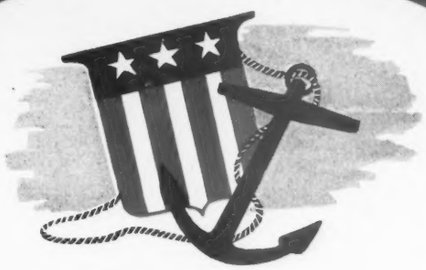
▶ A glance back at sub-chaser days recalls that many friendships were made through the chaser association. . . . Many guys who were serving with me at Corfu I never got to know until long afterward. . . . Others who were in the Queenstown crowd I already knew — among them Plute Goodwin and Tom Robins, the latter now a key man in the war production effort. . . .

Sandy Moffat — author of the immortal *Galley Guide* and presently a commander on duty, I believe, in his native Boston — was responsible for the founding of the Subchaser Club shortly after the war. The club enjoyed a fairly long life and united the men who had been in that service in a jovial camaraderie over a period of several years. . . .

John Shively was in the Corfu crowd and so was Alf Loomis. . . . John was a chief machinist's mate aboard Seward (*Johnny*) Johnson's chaser and ended up as an ensign aboard the captured Austrian battleship *Radetsky* after we made the raid on Durazzo. . . .

There was quite a party in Brindisi after that affair and they tell a story about a superior officer ordering his yeoman to go below after the return to their ship. . . . "Go below; you're *drunk*!" said the officer. . . . "You're drunk yours*elf*!" responded the intrepid yeoman. . . . "I know I am," said the officer, "but nevertheless *you* go below! . . ." "Well, you draw more water than I do," said the yeoman philosophically, "so I guess I will." . . .

TELLTALE



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In torpedo boats, landing boats and other types of military craft, both gasoline and Diesel, Delco-Remy marine electrical equipment is performing its vital duty with characteristic dependability. The benefits of Delco-Remy's long experience in the automotive field, and of close cooperation with marine engine builders, are reflected in every marine unit which Delco-Remy builds.

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PT'S—"PLENTY TOUGH"

On all Naval Fronts, units of the Mosquito Fleet in ever increasing numbers are swinging into action. Here is one of the Huckins boats running her trials off the Florida coast. With three supercharged Packards, she can outpace the speediest destroyer or warship

From a Kodachrome by Morris Rosenfeld

YACHTING

Volume LXXIII JANUARY + 1943 Number 1

Courtesy "Parade"

The long awaited moment has arrived! The start of a training run, with live ammunition in the magazine and "set" ashcans in the racks

WHERE THEY LEARN TO SOCK SUBS

Few Institutions for the Advancement of Higher Learning are as Popular as the Submarine Chaser Training Center at Miami—and with Reason!

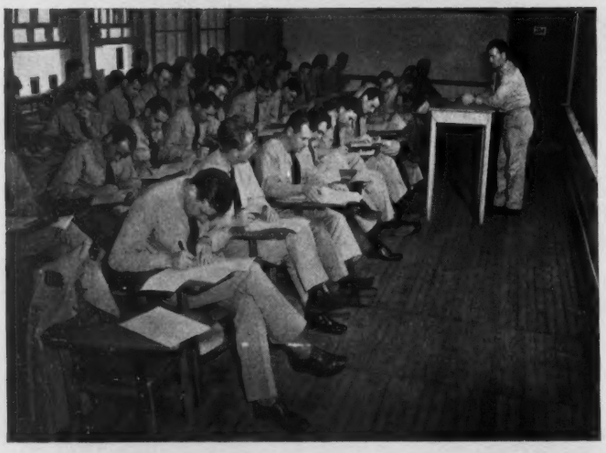
SINK that sub! So say the giant placards that hang in The Submarine Chaser Training Center at Miami. And the tramp, tramp, tramp of thousands of marching men beat out that slogan daily. There the sub sinking goal is the keynote of every motion, every lesson.

From the barren warehouses at Miami's Pier 2 has sprung a "university" for practical application of the arts of submarine warfare. From that pier a complete "little navy" operates. The trainees who are turned out of the school to man the SC and PC boats have had weeks of instruction under men who have known the Navy for a long time. More than half of the corps of four hundred instructors have seen action at sea in this war.

Two major divisions of the school operate separately but with coördination that is reflected in the crews. The officers, by far in the minority, attend classes in many phases of subchasing. Enlisted men in the other division are given related courses so that coördinated teams are constantly being run through the mill.

Officers are given instruction in several phases of antisubmarine warfare, administration, gunnery, communications, seamanship, engineering and navigation. They train for eight weeks and then are sent out to take over fighting craft after they have had a few days in the training ships.

Enlisted personnel sent to the school comes from the fleet, with some experience, or directly from naval training stations. The men who are to be taught all the fine details of hunting the underwater raiders are placed in the hands of men who have seen long years of service in the Navy. The



Official U. S. Navy Photos

instructors, most of them chief petty officers, are proud of the school and the branch of warfare they are helping to promote.

Based upon answers to questionnaires, or upon previous experience, each new man is assigned to a special department in the training school. His instruction for the next few weeks will make him a specialist in some branch of anti-submarine warfare. In spite of the intensive specialized training, the instructors guard against making a man so much a specialist in one line that he would be lacking in fundamentals of a related branch. Courses offered to enlisted men include engineering, electricity, communications, yeoman training, seamanship and gunnery.

Crews of PC boats are small, crews of SC's even smaller. Because of the limited manpower available, every man aboard a sub-chaser must be able to fill in for another in an emergency.

In addition to the training activities for anti-submarine warfare, the SCTC ship's company also includes a seaman guard unit trained in commando tactics and fire fighting. Also stationed at the school are carpenters, electricians, plumbers, pipefitters, sheet metal workers, shipfitters and machinists who are constantly busy with maintenance and repairs.

Even "growing pains" have failed to hamper the efficiency of the sub-chaser school. It was planned originally to be a school for about 600 men. The Navy moved into the pier in March, 1942, to begin training men. The industrial manager's office had done some preliminary work to fit the vast warehouses for school and living quarters but it was still a long way from its present-day form. Plumbing had been installed and bunks were set up. Then the Navy took over Manning's Restaurant for a chow hall. The first class that arrived totaled 150 men. Officers strove to increase the size until the normal enrollment would reach 600. There, expansion was scheduled to stop and the mill would grind out trained submarine fighters.

That did not last long. There was expansion and still more expansion. The enrollment passed the thousand mark quickly and kept soaring. Hotels in the heart of Miami were acquired by the Navy for barracks. Two of the largest are already housing trainees and soon the third will be occupied. A month ago, the total number of men learning the art of fighting the "rattlesnakes of the Atlantic" (and any other sea necessary) was posted as more than 4,500. And there is more expansion to come. Lt. Comdr. F. J. Condon, USNR, executive officer, declares that the school will soon have a constant enrollment of about 6,000 and that will be the peak level. But they said that before.

A new ship will soon be added to the "little navy" soon. She will be the DE (destroyer escort), a bigger ship than the "bucking broncs," the PC. These ships will demand more crewmen and it will be up to the Sub Chaser Training Center to supply that demand.

The only school of its kind in the United States, The Submarine Chaser Training Center carries its teaching out beyond its guard-patrolled limits. When a new ship is to be supplied with crew, only about half of the necessary men and officers are sent from the school. This trained portion of the crew then is charged with indoctrinating other members in the arts and sciences of "Sink that Sub."

Even a sailor becomes seasick in a sub-chaser. One hun-

Top to bottom. Lt. Comdr. E. F. McDaniel, commanding officer of the school, conferring with members of the Brazilian Naval Mission. Lt. R. G. Colburn instructs officers in administrative duties. Trainees get pointers on steering a compass course. Meet Oscar; he stands 24-hour watch in the crow's nest on the "ship ashore"

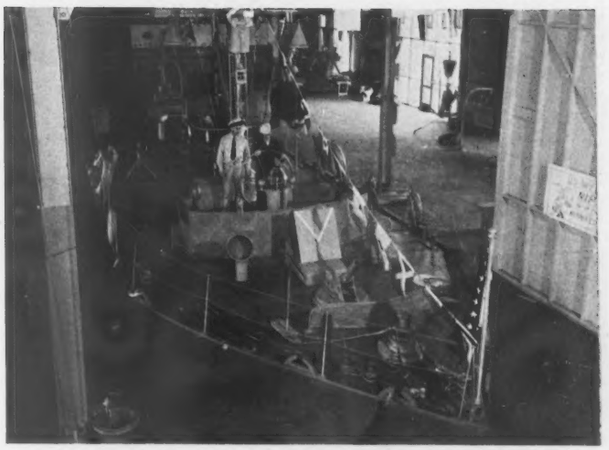
dred seventy-three feet of PC boat gets tossed about violently in rough weather and concentration on instruction would be difficult. So, for greater efficiency, the Sub Chaser Training Center seamanship school at Miami has a ship ashore. Nothing short of an earthquake could make that good ship roll. She's laid out on the deck (which in this case is the floor of the warehouse) and is complete in "every detail except engine room," the chiefs at the school declare. From the shipyards and yacht basins of South Florida have come the equipment that makes the miniature PC an ideal training ship. And, just to make sure, she is moored to cleats. A rail outlines the deck surface and gangplanks lead aboard from port and starboard sides. The bridge is complete with wheel, compass and engine room telegraph. On the mast is the crow's nest and "Oscar," a dummy, stands watch without relief.

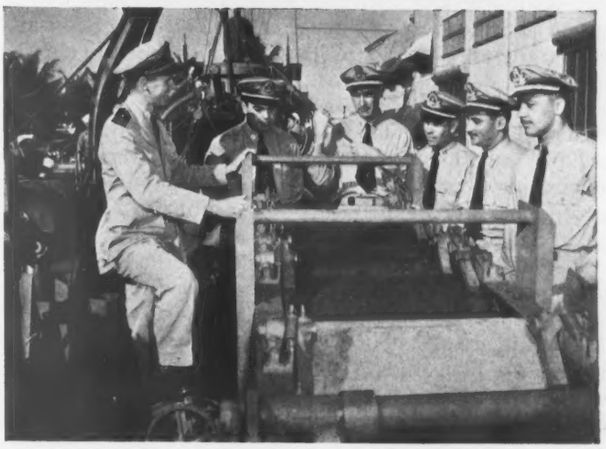
Regulation running lights warn "approaching craft" of the course and position of the ship ashore. Life rafts and life boats are carried aboard. Guns are mounted in positions that correspond to those on the PC boats. Signal lights flash from the ship and the seamen are trained in all their meanings. Even the courtesy of boarding a ship, saluting the national ensign, are observed by the men in training.

Surrounding the ship that never goes to sea are exhibits and models to aid in teaching various courses. The entire program is built on the keystone of practicality. Men learn by doing, not just being told or by reading. Old-time chiefs circulate constantly through the huge room and are always ready to help and teach young trainees. Guns are dismantled and put together again so that every man will know what makes them go "boom." Depth charges are available for study and experienced men take pains to point out the correct method of handling and discharging them. One model is loaded with sand instead of the usual 300 pounds of TNT. Life rafts are rigged with all emergency equipment clearly labeled. Model planes of both friendly and enemy design are constantly being pulled along near the ceiling on wires so the men may become familiar with the distinguishing marks.

Small groups of men, about a dozen in each, are constantly at work on some problem. Experienced instructors show them how to rig boatswain's chairs, splice ropes, make fenders, care for line. . . all the skills that make for a well run Navy, the kind of a Navy that is always prepared to go in slugging. Up in the sail loft men are taught how to work with canvas. There they are busy making covers for emergency rations or other equipment.

The newest addition to the school is the lookout training room, where the men get practical experience without going to sea. The room, about 30 feet by 30 feet, is lightproof and a tier of seats banks to adjoining walls. Diagonally opposite is a shelf, about waist high, with a curved top that resembles the earth's curve. Back of this, the wall is painted a dark blue. Between the wall and the shelf a bank of controlled lights is provided so that dawn may be simulated. Models of ships are moved across the horizon and students spot and report what they see in the half light which the enemy takes advantage of for attack. Light control keys make guns flash in the distance and the folly of lighting a cigarette is visibly explained by other light flashes. Instructors sit in the dark and watch the reactions of lookouts; their method of reporting is checked. The only difference between the simulated lookout duty and the real thing at sea is that no lives depend on the ability to spot a potential danger.





Top to bottom. Best riding sub-chaser of the fleet is the training "ship ashore." Training in gun handling. Student officers of the Brazilian Navy inspect depth charges on a PC boat. Firing practice while a motion picture camera records the operation for further study

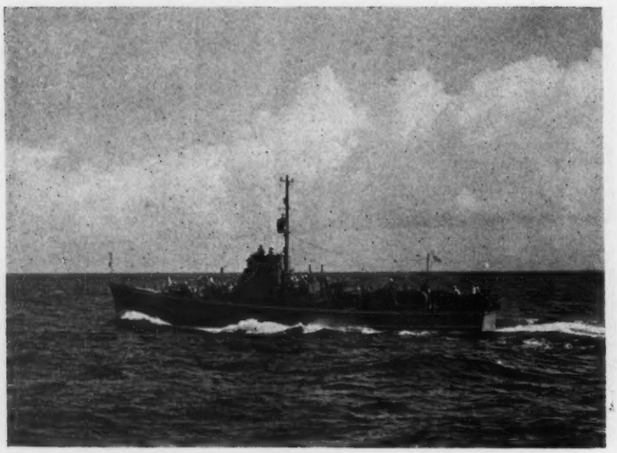
The machine gun's magazine is clamped in place

Despite all the training ashore, the men of the school are not "softies." Far from that! They are tough. They have to be, for the PC's and the SC's give a man a real test. They are "hard riding," small and cramped and every inch fighting ships with little room for comfort. But it's war and no comfort is expected by the crew. Like their instructors, the men have acquired a pride in their "little navy." It's little because their ships are little. In fighting heart, they believe it to be the match of any navy. And they are fighting an enemy they can't see.

But all the shore training is just the background. Rough sea or calm, the trainees shove off in PC and SC boats to put in practice all their lessons. They go aboard with the regular crews and go out on patrol duty. Their classes and semesters are not rigidly fixed. They are trained as long as they may be kept in the school or until they have absorbed enough information to make them useful men at sea. Between cruises and lessons, they are taught to handle small boats around the harbor and docks, how to heave a line, how to march in a military manner.

The old chiefs sit back and shake their heads when they see how "easy the youngsters" are getting off when it comes to marching. In the old days, there were many intricate formations that they had to learn to execute. Now it's all the simple flank movements. That's the streamlined Navy at work. Flank movements are the easiest methods of moving many men rapidly. That's all that's needed for fighting so that's all they have to learn. No frills — just warfare.

"Execute on signal," is the order from the bridge as a whole fleet of little ships (110-foot SC's) pounds along off the coast of South Florida. Suddenly each ship veers off her course, picks up speed and rushes into another formation.



Trim and businesslike, the 110' SC's are death on submarines

Maybe it's just a maneuver or maybe it's a mission of death. Regardless, it is still another manifestation of the policy of "Sink that Sub." No football team ever shifted its backfield and ran through a play with more precision than do these sub-chasing ships. And every one is a triple threat: depth charges aft, K-guns and machine guns amidships and more guns forward. But what makes it click? That all dates back to the time that these crews were training in the Submarine Chaser Training Center at Miami. There the crewmen received instructions in their specialties.

The communications school is broken down into four sections: (1) radiomen, (2) signalmen, (3) soundmen, (4) quartermasters. To them falls the job of keeping the bridge posted upon execution of the orders that come. They all get classroom work, of course, during their days ashore. But the classroom work is only to set the stage for the bigger parts they play in the drama of war, the big game hunt of the deep.

Radiomen are drilled in the transmission and reception of messages by radiophone and radio code. They learn how to care for and repair their instruments. Upon their skills may

The executive officer of an SC sits in the bridge where every control is at arm's length

at any time depend the safety of their ship and her crew. During their training course, they go to sea and alternate with the regular operators so that they will get working experience. They learn the layout of the ship, the nature of the work expected of them, the necessity for speed and accuracy even if they feel as though their stomachs are going to turn inside out with the next lurch and roll of the tiny craft. They must be prepared to keep their ship in contact with the shore base and with any aircraft that may be operating with them.

Above deck, high on the storm bridge stands the signalman. His eyes are constantly searching for signs of message coming from other ships. He is an expert in all visual forms of communications. He knows the Morse code and can read it in the blinker lights or from wigwag flags. He is trained also in the use of the semaphore code. He may be called below to run up signal flags from the flag bag on deck. His is the job of keeping all accompanying ships informed of the orders and intentions of the officers in regard to course, speed or other vital information. His skill comes from the hours of practice

(Continued on page 126)

VIVA DINGHY SAILING!

Frostbite Dinghy Racing, Past—Present—Future

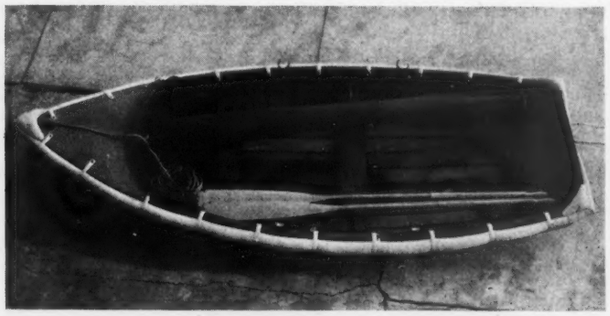
By SAMUEL WETHERILL (CAP STAN)

Distinctly a family sport. Here father and son sail together

FROSTBITE Dinghy Racing started as a lark on New Year's Day, 1932, in Manhasset Bay (Cow Bay to the Old Timers). It caught on like wildfire, carried on as a lark for a couple of years, and then settled down to regularly organized racing in regularly organized classes, both restricted and one-design. Today, it has spread to all parts of the country and Canada, with literally thousands of the miniature craft sailing and racing every month of the year.

What will be the future of Frostbite Dinghy sailing and racing? Well, we might easily start quite an argument about that. But, before we do that, let's hark back to the beginning, look into the development of the sport, see what it looks like today, and then gaze into our crystal ball for a prognostication of the future.

Back in 1930, George Ratsey, senior member of the sailmaking firm of Ratsey & Lapthorn, imported a couple of



The original Ratsey dink that started it all

dozen rather queer-looking sailing dinks from England. Some of them he presented to friends, others he sold. These craft were 11 feet 6 inches long, had a lug rig of 72 square feet area, and sails of a brilliant red hue. They were of a rather snubnosed, broad-sterned type, their other easily-recognised characteristic being a bulbous, sausage-like fender draped around the gunwale and a short forward deck. During the America's Cup Races in 1930, the veteran Sherman Hoyt, a member of the afterguard of *Enterprise*, could be seen on off afternoons cavorting around Newport Harbor in his red-sailed dink, visiting numerous friends and causing considerable excitement, if not suspicion, with his odd-shaped, red-sailed, pot-bellied bathtub. And, here and there, in various harbors along the coast, other red-sailed counterparts of Sherman's dink could be seen occasionally.

Nothing much happened for a time. Then, one summer's afternoon in 1931, Bill Dyer, of Providence, entertained George Ratsey aboard his Dutch hoogarts *Filalou*. George remarked jocularly that Bill should be trailing a Dutch dinghy astern. That gave Bill an idea. He got to work on it and built himself a sailing dink somewhat along the lines of *Filalou* — snub-nosed, broad-sterned, tumble home topsides, and bulbous fender — the same sized boat as Ratsey's imported craft, which was known in England as the Lyming-

One of the early Dyer "A's" showing lug rig and Dutch influence. Note the cushion fender

A B-O Class dinghy drifting. These boats have no fenders

ton Scow. Bill showed up at the Cruising Club rendezvous at Price's Bend in *Filalou* with his protegé towing gaily astern. A couple of impromptu races at Price's Bend followed, and the germ of Frostbiting was sowed.

Dyer built several more dinks along the same lines. One became the property of H. Martyn (Slim) Baker, of *Ranger* fame. And, one evening that fall, Slim was having a conference with Bill Taylor, then yachting editor of the New York *Herald-Tribune*, and a chap named Johnny Walker. Bill owned one of Ratsey's Prams — that was their moniker, as far as the Ratseys were concerned. Came an argument anent the relative speed of the two dinghies. With Johnny Walker cheering them on, a match was made for New Year's Day, 1932, in Manhasset Bay, in which the speed question was to be settled for once and all.

Now, Bill Taylor was, and still is, one of the best yachting reporters the world over. He received the Pulitzer Prize one year, for his reporting of the America's Cup races, remember? So Bill, with a nose for yachting news and desperately in need of something to write about during the barren winter months, began to give the match considerable publicity, playing it up in his inimitable, dry, witty fashion.

So, on New Year's Day, not only did Bill and Slim show up with their dinks, but some eight or ten other chaps hauled out dinks from sheds and boat yards, and held an informal regatta on a cold, blustery winter day, with rain which turned to sleet, then snow. It being a two-day holiday, the excitement was carried over another twenty-four hours, when all hands repaired to the grill of the Knickerbocker Y.C., where the Frostbite Yacht Club was formed. Dinghy racing had started!

Not a week-end went by that winter, or next, but that there was racing somewhere along Western Long Island Sound. More dinks appeared. Trailers were built, racks made for the tops of cars, so that one week-end you would find the fleet at Manhasset, the next at Stamford, then at Larchmont, City Island, Rye, Greenwich, and other points.

For some time, the racing was informal — and chaotic. Then order began to appear. Classes were formed, rules adopted, the informality gradually disappeared. Finally, dinghy racing developed into a regular, well-organized winter sport.

The Lymington Scow (or Ratsey Pram) and the Dyer Hoogarts model were the mainstays of what were called the Class A dinghies. Rules were made, so that other designers tried their skill at turning out dinghies which were to be faster, but still be good yacht tenders which could be rowed and towed, and with spars of such a length that they could be stowed inside the boat. But the racing men weren't satisfied; they wanted more speed and fewer restrictions. So, Class B was organized. The boats were the same size over all (11 feet 6 inches) with fewer restrictions on hull and rig.

Both classes flourished. Various designers entered the field: Alden, Potter, Warner, Herreshoff, Rhodes, Stephens, and others, and racing became a bit more serious.

The Class B, or Development Class, experimented with all kinds of rigs: jib-headers, loose-footed sails, wishbone booms, rotating masts, and what have you. Hulls got skinnier, less seaworthy, faster — and more expensive. Finally, the expense of trying to outdo the other fellow brought out

An Alden designed Class X dinghy with modern rig

Right, a group of the popular Penguins running before it

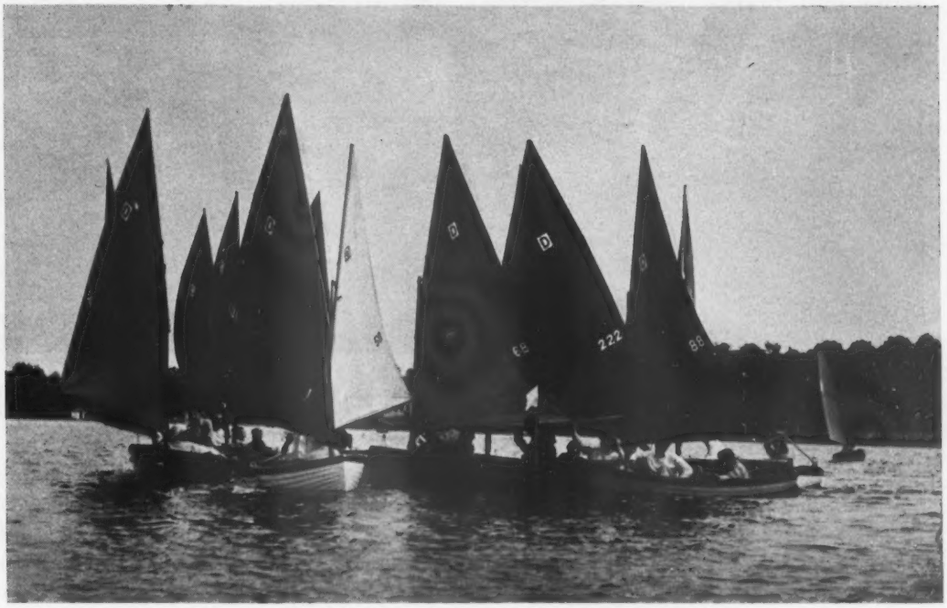
Right, middle, Coast Guard Academy cadets racing in the new pre-formed plywood 12-footers

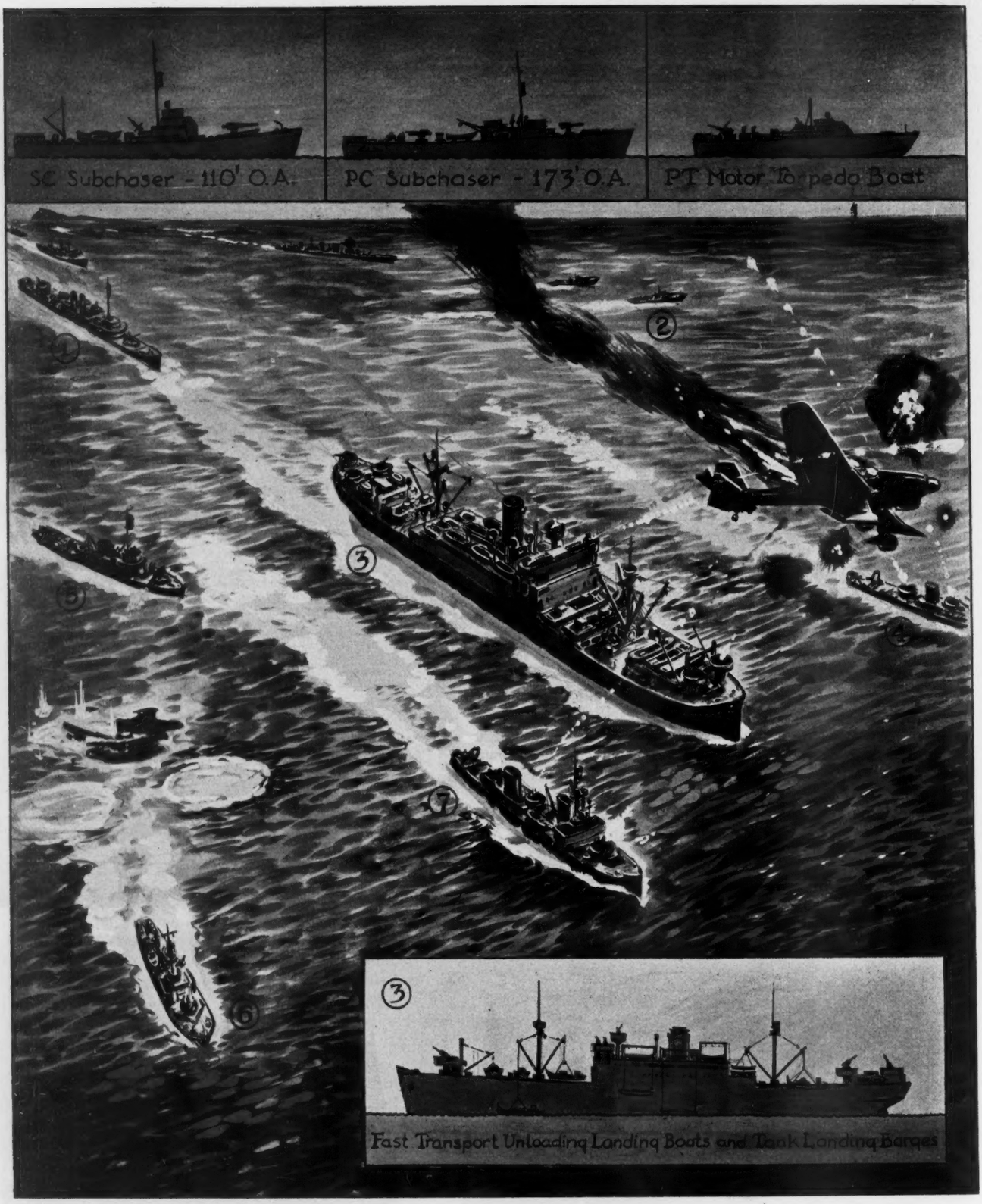
the one-design dink, the first being the One-Design Class B boat turned out by Nick Potter, known as the BO Class. This class prospered, and is still prospering, with numbers somewhere in the eighties, the principal centers of racing being at Larchmont and Manhasset.

In Class A, John Alden turned out a perfectly normal type of dink which easily proved its superiority over the prams and Dutch models. The Alden dink owners got tired of struggling with the then cumbersome lug rig, which, due to lax restrictions, had become a half-gunter, half-jib header — a monstrosity once named the Margaffoni rig. But they liked their hulls, which were fast, dry and comfortable. So they adopted a jib-headed rig almost identical with the BO rig, with 72 square feet of sail of the loose-footed variety. This was, and is, known as Class X. It caught on, and spread, and now numbers some 140 boats, with racing centers at Larchmont, Essex, Coconut Grove, Grand Rapids, and elsewhere. So the original Open Class B gradually disappeared, and the original Class A did likewise. By 1936, these craft were rarely to be seen, and today are but a memory.

(Continued on page 98)

Excitement at the mark. A tense moment in the popular Dyer 10-footers





SMALL BOATS PLAY IMPORTANT ROLE

World War II has written a new and colorful chapter in the history of naval warfare, and the part played by small warcraft has been prominent. Here are imagined two incidents in the amphibious attack on North Africa. The complete story cannot be told until after the war's conclusion, but official communiqués have confirmed the use of mine sweepers, motor torpedo boats, sub-chasers, landing craft and various types of assault boats in this dramatic operation. At the left, the reader sees a section of a fast convoy outward bound from Gibraltar. On the

IN THE NORTH AFRICAN CAMPAIGN

right is portrayed the action shortly after that convoy reached its destination off the North African coast. *Drawings by Jack Coggins.* Index to Drawing: Left hand page: (1) Flush deck destroyer serving as fast transport and carrying landing boats; (2) PT motor torpedo boats; (3) fast transport (converted liner) carrying landing boats and small tank landing barges; (4) mine sweeper; (5) SC 110′ sub-chaser; (6) PC 173′ sub-chaser; (7) mine sweeper. Right hand page: Landing operations under cover of large and small escort ships as well as aircraft.

NEW LAMPS FOR OLD

Changes in Navigational Methods, 1900–1942

By GEORGE E. ROOSEVELT

THE SEARCH for an infallible guiding light is among the noblest aspirations of the human soul; the search for an infallible guide is the quest of a navigator. I suppose that when a device automatically plots the position of a boat on a chart so that the exact position at any time in the past or present can be seen at a glance, it might be considered that the navigator's quest is ended. Of course, if a man has the scientific mind of the student of astronomy or quantum mechanics, even this would not satisfy him. He would require that all positions in the future also be plotted for his inspection.

We have not yet even approached this degree of knowledge but I remember that, back in 1900, it was thought that navigation was as well developed as necessary. Ships sailed on their appointed routes, keeping reliable schedules. Knowledge was proud because it knew so much but, although knowledge is proud, wisdom is humble because it knows not more. If you have a sound, seagoing stomach and can take a large dose of humble pie at one gulp, I shall give you a simple method for preparing the pie. Take a copy of the "American Practical Navigator," dated about 1900, or of Lecky's "Wrinkles in Practical Navigation" of approximately the same date, and then compare these works with a Bowditch or a Dutton, dated 1942. Page after page of the two later works deal with subjects not even mentioned in the older books, whereas the older books discuss at great length matters not even considered worthy of comment by present day writers.

A Sperry gyro-compass bearing repeater on the bridge of a steamship. This repeater, with others located in strategic points about the ship, is controlled by a master gyro compass located below deck

Two different causes led to the changes required by changing times. One was the desire for a different kind of navigation; the other was the discovery of hitherto unknown forces. Recall that, in 1900, the airplane, the gyro compass, the radio, the bubble sextant and the sonic depth finder were either unknown or known only in elementary form to a very few, and their influence on everyday life and on the sciences of the sea was negligible.

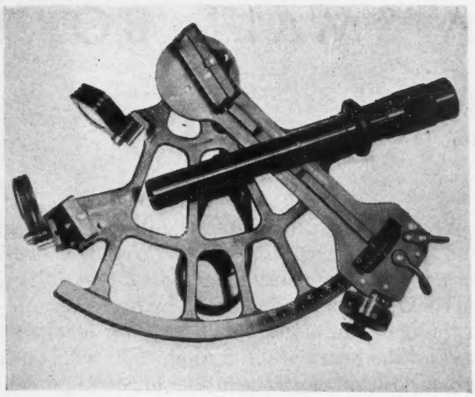
Almost from the very beginning, the airplane required a more rapid method of ascertaining its position than had been required on boats. At the same time, it did not need as accurate determination. Furthermore, due to the elevation at which planes could operate, the difficulty of finding a satisfactory horizon reintroduced a requirement that had been dealt with in a leisurely manner by the old sailing ship captains. When they wished to check their chronometers at a known position on land, they sought an artificial horizon and found it in a bowl of mercury, molasses or heavy oil. The airplane, however, required a different type of artificial horizon and that requirement produced the bubble sextant.

The bubble sextant is based on the old principle of the spirit level and has been developed to meet the needs of the airplane navigator. I carried one type of bubble sextant in the Bermuda race of 1932, and another type in the race of 1934. For my purposes, they were no good. The bubble, in company with various other travelers in the Gulf Stream, got violently seasick and refused to behave normally. The motion of a small boat certainly disconcerted its equilibrium. It was not in the least concerned whether it made an error of fifteen miles. However, it has proved of great value in the air and much airplane navigation would be impossible without its use. This is an example of a device worked out specifically for new requirements.

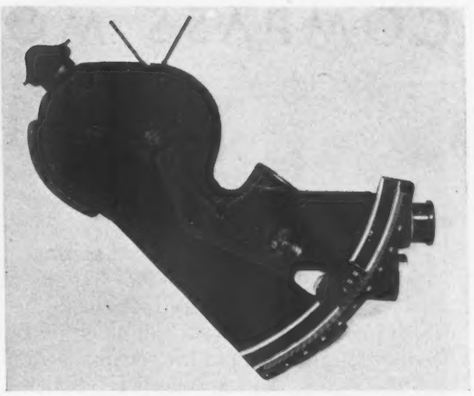
The next device that I am going to mention, the gyro compass, was developed for the same reason. The action of a rapidly spinning sphere with three degrees of freedom was known in principle to Lord Kelvin but he did not have available the electrical power or the theoretical mechanics to enable him to build a workable compass. In the year 1900, a certain Mr. Elphinstone did go to sea with a gyro compass but it did not work satisfactorily enough to be adopted at that time.

I think one word of explanation of the gyroscopic principle would be desirable. If a wheel or a sphere is rotating rapidly, pivoted in the center of gravity so that it is free to orient itself as it pleases in three-dimensional space, then in accordance with the laws of mechanics, and specifically in accordance with the principle of Foucault, the rotator will settle down into a position where the axis on which it rotates is parallel to the axis of the earth. From this phenomenon, we are able to build a north-pointing gyro compass.

I looked in the 1910 edition of the "Encyclopedia Britannica" and, although it discoursed at length on the general



A modern marine sextant built by Eclipse Aviation — Pioneer Instrument. It has the old time vernier replaced by a micrometer screw, making reading much simpler



The Link bubble sextant, devised mainly for the use of aviators. Neither natural nor artifical horizon is needed when observing with this instrument

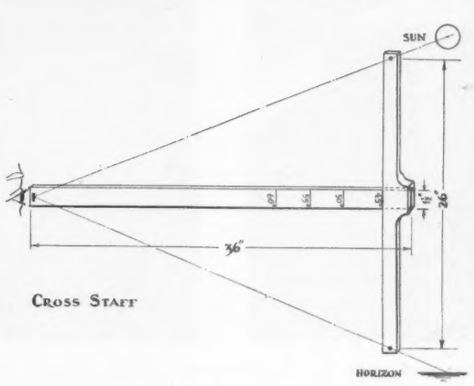
theory of the gyroscope, it did not mention the fact that it could be used as a compass. It was not until after World War I that the gyro compass came into general use. Its great advantage is that it points true north and eliminates the necessity of calculations for variation and deviation. Its disadvantages are that it is a large, expensive, delicate instrument and that a substantial amount of electric current is required to keep it running. Therefore, it must be supplemented by a magnetic compass, which latter must be relied on entirely in the open boats so frequently resorted to after torpedoing. Both the appliances I have mentioned were developed specifically as aids to navigation but it is well to remember that the bubble sextant is an aid to air navigation whereas the gyro compass can be used, as at present developed, only for surface navigation of large vessels.

The next instrument that I shall mention was also developed specifically for purposes of navigation, this time for boats and not for planes. I refer to the sonic depth finder. The principle is as old as Greek mythology. If you recall, Echo (with a capital "E") was a Greek woodland goddess. The sonic depth finder is merely an apparatus for timing an echo from the bottom of the ocean to the bottom of the boat. Why it was not thought of before is somewhat of a mystery; perhaps it was because Lord Kelvin's deep sea sounding apparatus was satisfactory for the depths of water with which most mariners were concerned in the last century. As long as a captain had a few fathoms under his keel, he was as well satisfied as though he had a few miles. However, there are certain places were the deep sea lead is useless and a sonic depth finder most helpful. The place having those characteristics with which I am most familiar is Bermuda. Two miles off the outer edge of the reefs, the water is a mile deep and the reefs lying just below the surface stretch to a distance of approximately eight miles from the land. Of course, on a coast with these characteristics, continuous soundings are a great help. Also, in mapping the floor of the ocean, the sonic depth finder is invaluable.

I now come to a development of recent years which affords an excellent example of the course of development of an invention through several generations. In the early days of Queen Victoria, Michael Faraday made a little toy by means of which he produced an electric current. The result was achieved by spinning magnets inside a loop of wire cord. Gladstone, who was then prime minister, after watching a demonstration of this toy, sneered at it, remarking: "Perhaps it is interesting, but what use is it?" Faraday, well versed in the subjects that interest prime ministers and looking years into the future, replied: "Some day you may be able to tax it." If you will check up on the taxes paid by electric power companies at the present time, you will perceive that Faraday had more than the germ of an idea. The next generation in the family tree of this invention is the brilliant mathematician, Clerk Maxwell. After much study, he produced his famous electro magnetic equations and a competent interpreter can read from them that, under certain conditions, electro magnetic waves can be propagated with the speed of light. No apparatus was then available to produce such waves but, shortly thereafter, the experimental physicist, Hertz, invented what he called an electric oscillator capable of delivering the waves predicted in Maxwell's equations. And the final step was taken by Marconi who rigged up his apparatus and sent wireless messages.

Since then all has been refinement and improvement. Creation has been completed by an Englishman, a Scotsman, a German and an Italian. The dramatic use to which wireless could be put in connection with the sea was first brought vividly to public attention by the sinking of the *Republic* and the rescues accomplished because of wireless messages. Later, radio direction finding, radio beams, radio political addresses, and atrocious radio programs, have all come to be. Pages devoted to radio navigation in the modern textbook exceed the pages devoted to lunars in an 1898 Bowditch.

I think that the greatest effect of radio in navigation has been in connection with time signals. The sending of frequent, reliable time signals reduces the necessity of accurate chronometers close to the vanishing point, but it must be remembered that the radio is a two-edged sword. You may be receiving correct information from a friend or incorrect information from an enemy. The wireless equipment on an enemy boat can be used to send out incorrect bearings and incorrect time signals and incorrect information, to the confusion of the navigator and not to his benefit.



Cross Staff

About the turn of the century, the need for a reduction in the paper and pencil work of a navigator became increasingly apparent. Two naval officers, one a Japanese named Ogura and the other a Brazilian named Radler de Aquino, published tables in an attempt to simplify the navigator's computation. They were not by any means the first in this field. In 1876, Lord Kelvin published "Tables for Facilitating Sumner's Method at Sea" but, for some reason, these tables were hardly noticed; in fact,

(Continued on page 124)

COMPASS MOUNT FOR A SMALL BOAT

A Simple Rig for Use When Necessary

By JOHN F. CONROY

THE solution of the problem of where to put the compass in a small auxiliary has been approached from different directions by various builders. It's been installed on the outside of the cabin bulkhead; on the inside, lighted from the cabin; underneath the cockpit floor, to be seen through a deadlight; on the floor of the cockpit, held in place by cleats; and there are various types of binnacles designed to be bolted to the cockpit floor. With the exception of the raised binnacle, each installation mentioned above has the disadvantage of inducing much eye strain when the compass is really needed. This is particularly true when the ship is caught out in a fog because then, unlike sailing at night when stars or shore lights may be used to check the course, the compass must be watched almost constantly.

In the average small boat cockpit, the raised binnacle is so much in the way as to be almost totally impracticable — aside from the fact that it is questionable whether the really small binnacle can be built substantially enough to stand the pushing around it is bound to get.

Which brings us to an arrangement that is so simple and so highly satisfactory that I am puzzled to know why it is not in widespread use. While I originated this arrangement which is fitted in my boat, I can't believe that it is not in use in at least some of the boats in service — even though I have not yet seen such an installation.

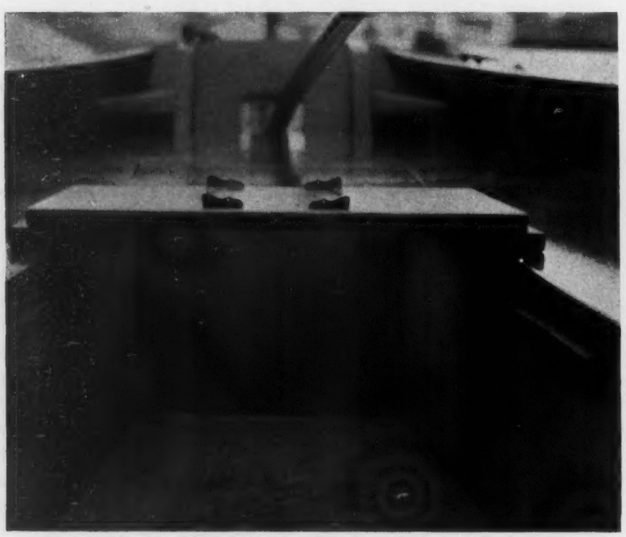
In effect, the plan is simply to mount the box which houses the compass on a board placed athwartships across the cockpit seats, first making sure that the lubber line is in correct alignment. In my boat, the tops of the cockpit seats overhang the sides of the cockpit well by about one and a half inches. Just underneath this overhang, and forward of where the helmsman sits, short cleats have been fastened against the sides of the well on each side of the cockpit. A piece of mahogany, wide enough to hold the compass box and long enough to bridge the cockpit well, is cut to fit. Cleats are fastened on each end of the under side of this board so that they fit on top of the cleats already secured in place on the sides of the well. The photographs show the simplicity of this arrangement. When it is set in position, the top of the board is flush with the top of the cockpit seats. When this board is finished off in a workmanlike manner, and varnished, it looks like part of the cockpit. The cleats should be fitted carefully so that, when the occasion arises which calls for steering a compass course and the board is slid into place, it will rest in exactly the correct position, with the lubber line in alignment with the ship's head. When the compass is not needed, the board is removed from its position and stowed, leaving the cockpit entirely clear of any encumbrance.

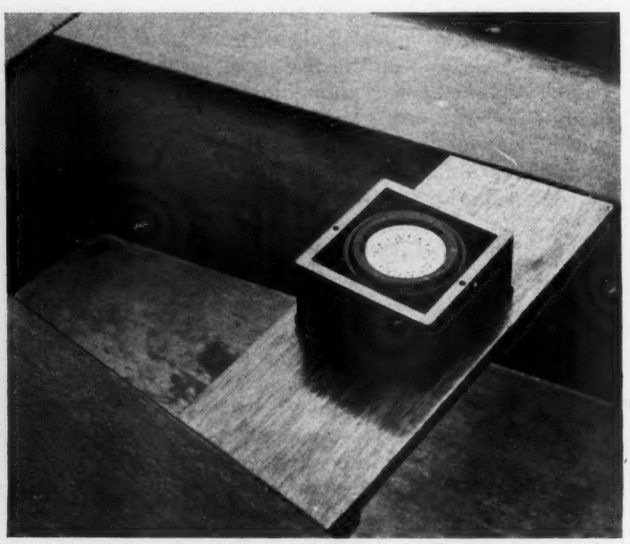
On top of this board I have fastened four brass corner pieces. They are spaced so that the compass box, when it is pushed down into place, is held firmly. Small wooden cleats work just as satisfactorily, however, and nowadays may be easier to get than the brass. The compass box should be marked so that it is always set on the board with the same side facing forward. This is just in case the compass gimbals are not exactly square in the box.

This arrangement has the advantage of making the compass card far easier to see than one which is set at floor level, and it does not have the inconvenience of a permanent binnacle built into the middle of the cockpit floor. In addition, it helps to reduce the deviation since the compass is farther away from the motor than when it is under the floor. The compass box need not be permanently fastened to the board as it is much easier to stow the two units separately.

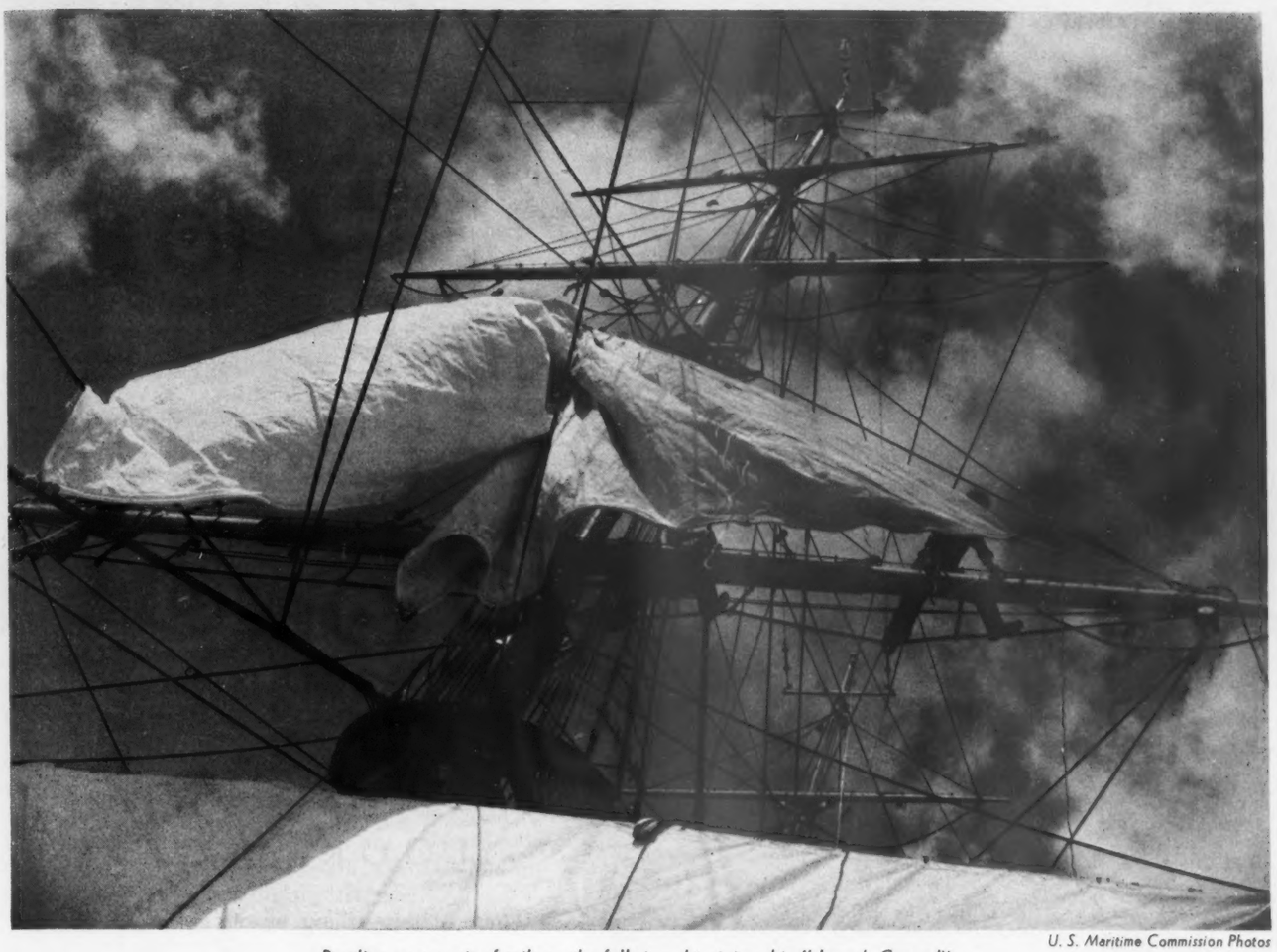
In my boat, the cockpit well is narrower at the after end. When the compass board is pushed into place, it is automatically wedged into the correct position, with the lubber line in proper alignment. In a cockpit with parallel sides, stops should be placed on the after ends of the cleats fastened to the sides of the well. The compass board will then be in exactly the same position every time it is used.

In the average small auxiliary, there are few occasions when it is necessary to use a compass during a season of week-end cruising. Yet, when it is needed, it probably is needed badly. A simple installation such as this, accurately checked, might be the means of bringing the ship into port.





At the left, the construction of the mount is shown, while at the right it is seen in position for use



U. S. Maritime Commission Photos

Bending a new suit of sails on the full-rigged training ship "Joseph Conrad"

TRAINING IN SAIL

It Was Not Sentiment, But a Man Named Schickelgruber, Who Inspired the Nation's New Sail Training Program

By CRITCHELL RIMINGTON

FAR FETCHED as it may sound, honest analysis reveals that one Adolph Hitler is undoubtedly the man who can take most of the credit for the widespread program of training in sail which is now being conducted at naval and merchant marine training schools through the country. Hate as we do to admit it, der Führer is owed a debt of thanks.

Prior to the present war, the United States was the only important naval power which did not employ sailing vessels of any size in its naval and merchant marine training program. The large schoolships of Germany, Japan, Norway, Sweden, Denmark and certain South American nations were frequent visitors in American ports, and the sight of these handsome vessels (which invariably crashed the headlines by entering or leaving port under full sail, and without tugs) never failed to rekindle the frequently voiced proposal for similar vessels of American registry.

It remained for our present training program — Navy, Coast Guard and Merchant Marine — to enlist vessels of every kind and size to act as experimental laboratories for the countless phases of nautical science. Fortunately many of these were sailing craft and, while most of them were yachts of conventional dimensions, not a few were large seagoing vessels.

The Coast Guard Academy at New London, Conn., has expanded its normal seamanship courses and is now embarked upon the most extensive sail training program in its history. Its fleet is headed by the *Danmark*, the ex-Danish training ship which has become a welcome and majestic sight in Long Island Sound waters during the past summer. There is also Gerard B. Lambert's famous schooner *Atlantic*, in addition to a notable fleet of seagoing yachts including *Curlew*, *Innisfail*, *Teragram*, *Northwind*, *Anstan III* and *Talisman*. The *Danmark* was in a Florida port at the outbreak of the war; today she and her officers are employed by the Coast Guard, and the ship is used for the training of candidates for reserve commissions during their four months of instruction. The acquisition of the other vessels was made possible by Gerard B. Lambert, George W. Mixter, Gerard

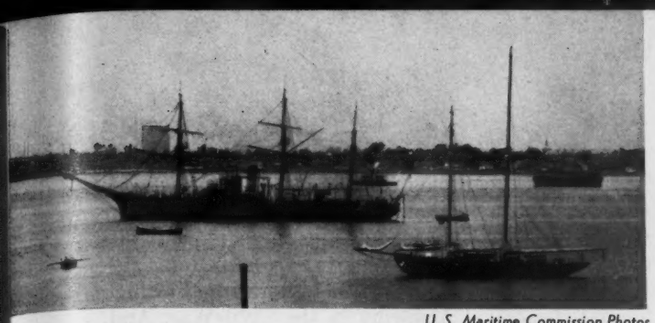
The "Joseph Conrad" is smaller than she looks, but her yards appear monstrous to a green hand. Below, Gerard B. Lambert's former yacht "Atlantic," now a training ship, is a magnificent example of the three-masted schooner rig

"Sea Cloud," the largest sailing yacht in the world, under full sail. A four-masted auxiliary bark, she affords her apprentice crew the opportunity of instruction in the complexities of power as well as sail

LOOK ALOFT!

These stately sailing vessels which, with the exception of the "Joseph Conrad," were designed solely for the pleasures of sailing, are now serving as training ships for cadets

The auxiliary schooner "Vema," veteran of many famous transatlantic passages, when owned by G. U. Vetlesen



U. S. Maritime Commission Photos

The training vessels "Emery Rice" and "Felix Riesenberg." Right, small boat drill at the King's Point training base. Middle, sending up a yard on the "Emery Rice." Bottom, "Tusitala," "Joseph Conrad" and the S.S. "American Seaman" moored in an unnamed port during a southern cruise

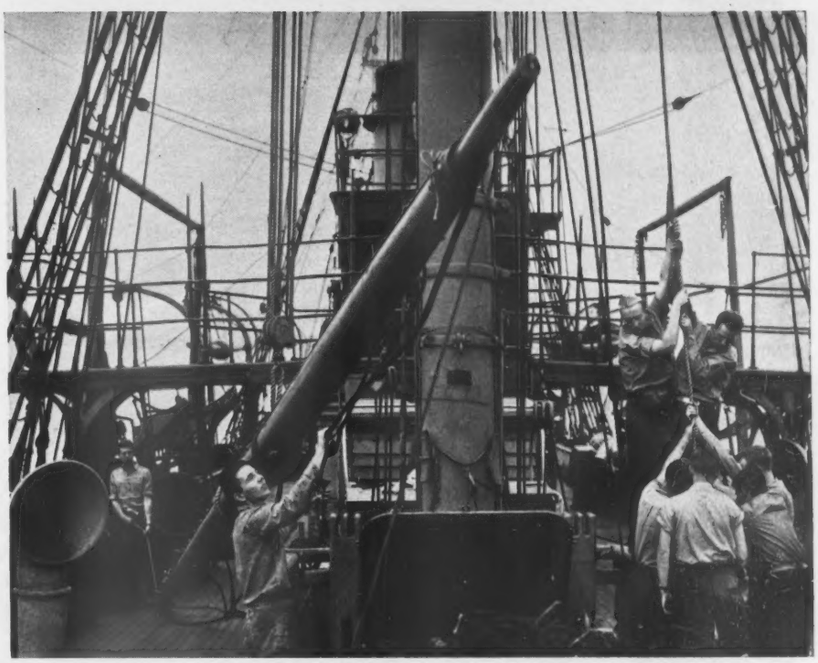
and John Smith and W. J. Schiefflin, Jr. and other public-spirited yachtsmen.

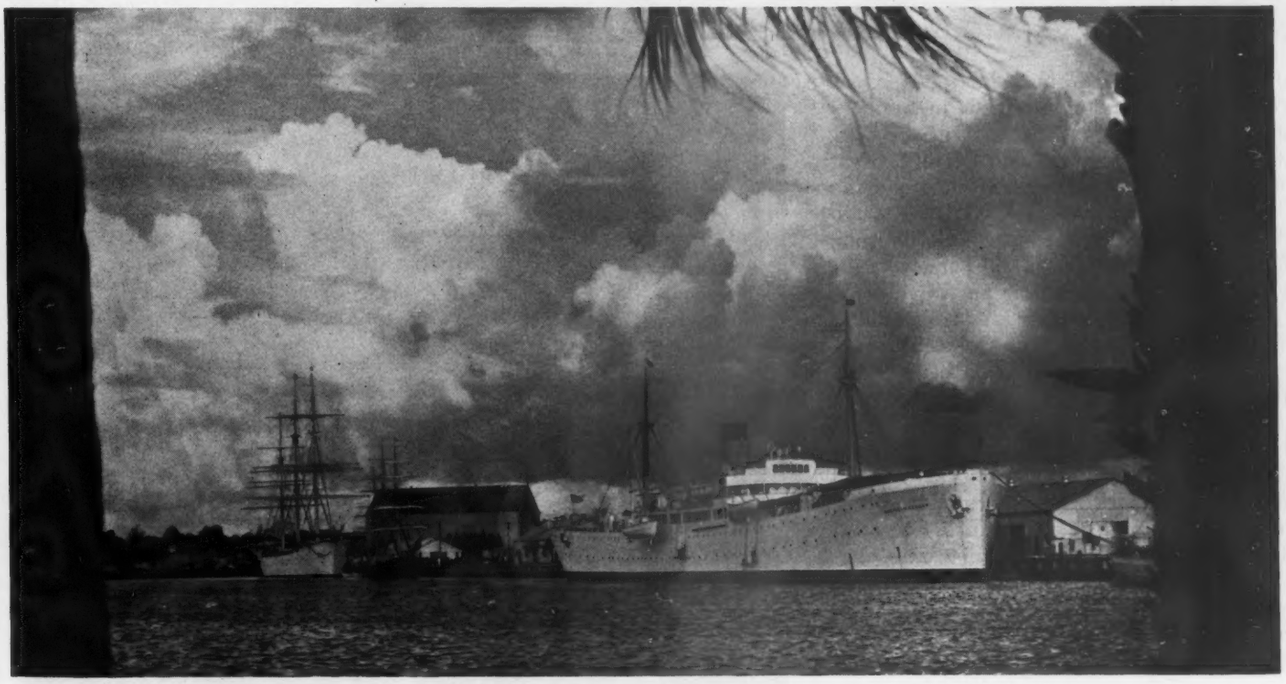
The U. S. Naval Academy has long stressed practical experience in sail, and although her fleet of small boats has been supplemented by a substantial number of ocean-going yawls, the Academy has yet to employ a sizeable sailing ship. Experience has proven that the various types of "summer" sailing craft now at the Academy answer their training needs most satisfactorily.

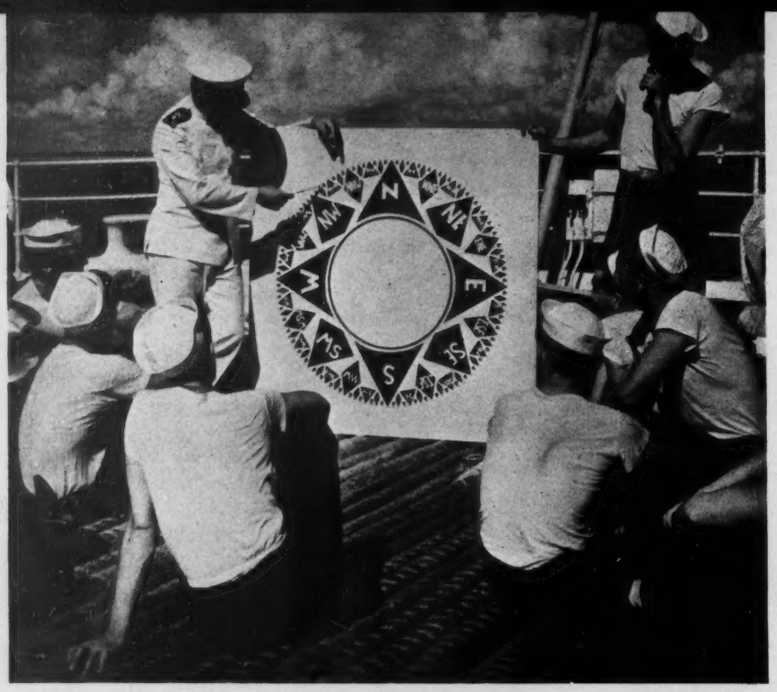
Mention should be made of the highly successful experiment conducted last summer by Chicago yachtsmen under the sponsorship of Sheldon Clark, president of the Navy League. Over thirty yachts, ranging from 30 to 110 feet over all, were made available on certain days to some 1400 midshipmen of the Navy's officer training school at Northwestern University. The program was heartily endorsed by the Navy, and it is understood that yachtsmen in Chicago, Detroit and other centers are contemplating continuing the practice during 1943.

Today no less than five sailing vessels — *Emery Rice, Joseph Conrad, Vema, Sea Cloud* and *Tusitala* — in addition to smaller auxiliaries such as *Sea Love, Felix Riesenberg* and others are in the training fleet of the War Shipping Administration, which now directs the training division of the Maritime Commission.

Today there are over 5200 Merchant Marine Cadets training to become officers. Their courses of







The three class rooms are Saratoga, Saint Mary's and Enterprise — names of famous sloops of war which served as state school-ships in years past. The gunnery buildings are Constitution and Ranger — the former being named for the famous frigate which housed the Naval Academy in the Civil War. And, to continue in American sea traditions, the auditorium is known as Bowditch Hall and the staff barracks as David Porter!

Whether at anchor or under sail, American seamen are again climbing the ratlines in a manner which would bring a glow of pride to the "iron men" of an earlier generation. So — if it hadn't been for Herr Hitler there would not have been a war, and without a war we would probably still be talking about the possibilities of a program such as is now taking place — therefore, Adolf is really the man responsible.

It's a darn shame that such a grand idea should have so rotten a godfather. *Verboten!*

Top, left, learning to box the compass under ideal conditions; a clear, sunny day and a nice, soft hawser to sit on

The "Danmark" close hauled under full sail. Thanks to the protected waters of Long Island Sound, her training cruises have not been interrupted

Apprentice seamen receive instruction in splicing a heavy hawser. Training is given in every phase of deck seamanship

study cover a period of approximately sixteen months, of which the first two months of preliminary training are given at Cadet basic schools at the U. S. Merchant Marine Academy at Kings Point, Great Neck, New York; Pass Christian, Mississippi; San Mateo, Calif.; and at the five State Maritime Academies which are operated by the states of California, Maine, Massachusetts, New York and Pennsylvania. Although all of the training centers provide diversified instruction in boat handling, it is at Kings Point, Pass Christian and San Mateo that the keenest sailing is done. There, under the direction of seasoned officers, the cadets are afforded the opportunity of really learning the way of ships and the sea.

The largest institution of its kind, the Sheepshead Bay Maritime Training Station, located at Oriental Park, Brooklyn, New York, is the latest addition to the growing list of government ship schools. Equipped to train 10,000 apprentice seamen at one time, it is scheduled to graduate over 30,000 of the 100,000 men needed to man America's growing merchant fleet. Sailormen everywhere will give a nostalgic sigh on learning the names of a few of the school's buildings.

ICE BOATS

Part III — Hull Design and Construction, with Certain Details

By RAYMOND A. RUGE

A Class B ice boat, a stern-steerer of the stick backbone type with open cockpit. Her rig is fairly short on the base and the weight of the crew is carried well aft

LET US now turn our attention to the hull, to see how to give our rig the best possible vehicle. Speaking in the broadest of generalities, the ideal hull would be strong enough to take all the stresses that may come to bear on it; light enough to be easily handled and yet not so light as to sacrifice momentum; easily and surely steered; comfortable enough to allow the driver to devote his attention to driving and none to hanging on, and shod with the fastest and most maneuverable runners for the conditions prevailing.

The principal hull member, running fore and aft, is variously called "keelson," "backbone," "body," or "fuselage," depending on its design and the word most common in local usage. Its functions are many; in fact, it *is* the boat. The rig drives it, and the runner plank and runners carry it. It must carry the crew with reasonable safety and comfort; it must contain the control elements — steering gear and sheet blocks. Finally, it must carry the mast step (except in the case of the lateen rig). The mast step is subject to terrific stresses which may easily be underestimated.

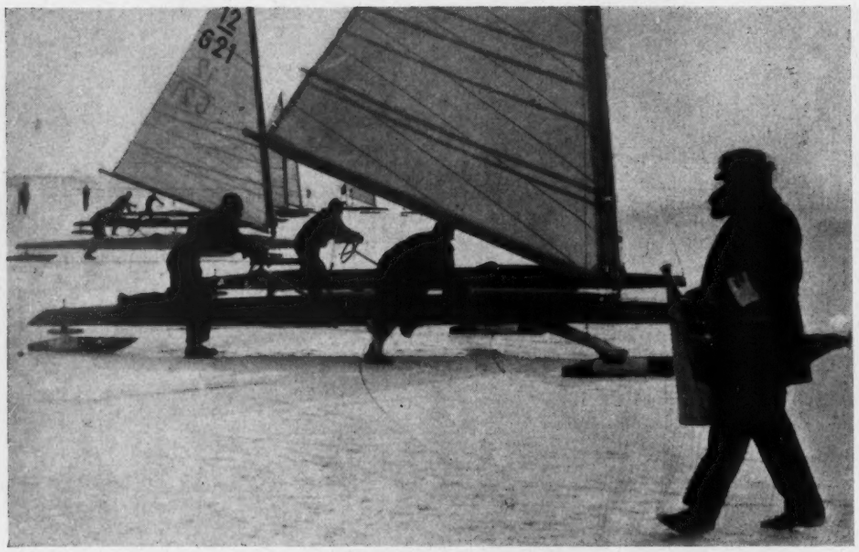
Since the backbones of the bow- and stern-steerer are stressed quite differently, we should not be surprised to find accepted practice in the two types differing widely. The backbone of the bow-steerer is fundamentally a simple beam, supported at its two extremities. This beam carries two loads — the weight and sailing pressure of the rig, at the mast step; and the weight of the crew, close to the rear point of support (runner plank). The mast load is highly variable, reaching a maximum whenever a strong puff strikes the sails. Since the mast step in a bow-steerer is usually located almost at the mid-point of the span between supports, the backbone must be carefully designed to take *all* the mast pressure without danger of failure. The weight of the crew is carried so close to the runner plank that it hardly stresses the backbone, and it is safe to assume that a backbone strong enough to withstand mast pressures will carry the crew without extra strengthening.

Engineers tell us that, in a simple beam, the point of maximum load is the point of greatest "bending moment," that is, tendency to bend. Since the resistance of a beam to bending is in direct proportion to the square of the depth of the beam, the backbone should attain its greatest depth at the mast step and can safely taper down both forward and aft. Theoretically, it may taper to zero, since there is no bending stress at the point of support. Practically, there are other factors which govern the depth at bow and runner plank. These are rudder post bearings and headstay anchorage at the bow, and the accommodation of the crew aft by the plank.

So much for theory; how about practice? The single-stick backbone has been almost entirely abandoned by bow-steerer designers, and has been supplanted by the "box" or "fuselage" backbone. This consists of two side pieces, on edge, meeting at bow and stern, and spread apart enough to permit the crew to ride between them. They are spaced and braced by transverse bulkheads of plywood, and a plywood deck and bottom. This construction is rigid and non-twisting, a great improvement over the crazily twisting solid backbones which often used to toss the crew overboard. In addition, it affords the driver a safe, sitting-up position which increases his comfort and efficiency. Resistance to bending in such a structure comes from every element in it, for it is "welded" into a unit by waterproof glue at every joint. Nevertheless, the side pieces contribute practically all the resistance or "stiffness," with some help from the crowned plywood deck. The deck would contribute far more than it does if the openings for the cockpits were not taken out of it but, after all, the skipper has *some* rights!

One effective aid in carrying mast thrust has been practically abandoned by bow-steerer designers. This is the simple bobstay running fore-and-aft under the backbone, with its strut directly under the mast step. I feel that it is so light in weight, so simple in construction and so telling in effect that there is no excuse for not installing it in every boat. By carrying the mast thrust out to the side rails with transverse bulkheads, and also carrying it straight down to the bobstay strut with a fore-and-aft bulkhead, an extremely strong pressure distributing system can be built.

The side pieces of the hull are best made from Sitka spruce, although carefully selected Douglas fir is a good substitute. The thickness of the side pieces varies with the



Start of a race of typical European stern-steerers. Note the fuselage type of backbone, wheel steering, cat rig and rotating masts

size of the boat but usually runs from $1\frac{1}{16}$" in racing Skeeters to a full 1" or $1\frac{1}{16}$" in larger boats. Depth from top to bottom varies from 5" to 6" at the bow to a maximum of 10" to 12" opposite the mast step, dropping off to 9" to 10" at the runner plank, then tapering rapidly to the tip of the stern.

A good many fuselage boats are now equipped with windshields, exactly like those mounted on open airplane fuselages. It is significant, however, that not one championship winner in the Eastern Association and, to the best of my knowledge, in the Northwestern Association either, has carried a windshield. The answer is not that these boats are manned by supermen, who sail gaily on, oblivious of the biting wind in their faces. It is simply a matter of preference; the best skippers seem unanimous in believing that a windshield prevents them from "feeling" the wind properly. Goggles or face masks are often worn when the temperature is too low and freezing of noses seems to threaten. They are discarded the moment they can be spared in favor of the unimpaired chance to feel the wind.

The bottom of the fuselage, like the deck, is a layer of waterproof plywood, glued and screwed to all bulkheads and to the side rails. It is good aerodynamics to put a bit of protruding "belly" into the bottom of the boat, to round out the fuselage as much as possible. The runner plank, which rides directly on the under side of the side rails, can therefore be nicely inserted into this bulge in the bottom of the boat, eliminating its resistance for the width of the hull. While this may not seem a major item, it is worth doing since, in hull streamlining, the tiniest bit helps. It is better to paint the name of the boat on the side rails than to mount two projecting mahogany name boards! It is just this sort of "ridiculous" extreme in streamlining which makes that unaccountable difference in speed, especially to windward.

One function of the backbone not yet discussed is that of carrying the two principal control elements of the boat, main sheet and steering gear. The main sheet consists of a train of single blocks mounted on the center line of the after deck. An oak strip is built into this deck and securely fastened to all bulkheads, to afford a strong anchorage for the blocks. The sheet is led back and forth between these blocks and those on the boom, runs forward under the boom to a single block on deck just abaft the mast, and thence aft to the cockpit.

In a praiseworthy but shortsighted effort to avoid all projections on the hull, early bow-steerers often carried a main sheet led down through the deck just abaft the mast, thence over another sheave on the cockpit floor and aft to the driver's hand. In passing around and through the driver's feet, legs and clothing, more than one sheet got tangled up, with unhappy results. Consequently, this sheet lead has been abandoned. The lead on top of the deck permits the use of one ingenious successful device, the "stirrup" type of jam cleat, which is merely an inverted U-shaped metal clamp through which the sheet passes, and which snubs it down against the deck when a foot pedal is pressed. It is nonjamming, instantly releasable, and is the only cleat recommended for the main sheet. When using it in a good breeze, however, the skipper must be extremely careful to judge every strong puff as the absence of the tugging sheet in his hands robs him of the most effective of all warning signals — the sheet starting to slip through his grasp.

And so we come to the steering gear. Here, again, tradition has hindered design tremendously. Because sail boats — even big ones — are steered with a tiller, ice boats were rigged the same way. The "feel" imparted through the tiller of a sail boat is ample justification for its use in every racing sail boat that can be properly handled with it. It tells the helmsman things he must know. His vehicle is moving at a speed of 5 to 15 miles an hour, a rate at which tiller control is perfectly practical. No sail boat answers her helm as fast as the poorest ice boat; a sudden small jerk of the helm will probably not alter the course of the boat at all. In an ice boat, this can be fatal. The sharp steering runner provides absolutely instantaneous answering of the slightest twitch of the helm, and at a speed commonly ranging from 25 to 60 miles an hour. Imagine trying to steer your automobile at 25 to 60 miles per hour with a direct-connected tiller! You wouldn't dare try it. And what have the automobile designers provided, to give safe, sure control of a fast vehicle? A neat, foolproof, worm-geared outfit, ideal for your ice boat. No need to get a gear from a big, heavy car; those used on Model "A" Fords of the early '30's are perfect for the purpose. Rig the gear so that it turns an arm or sheave connected by airplane cable to a similar one on the rudder post.

As in the question of weight, discussed in Article I, my only counter to those who disagree violently with this idea of using auto gear is to "look at the record" of several years of racing. First, the rudder is never turned so quickly that it loses its grip of the ice — an easy mistake to make with a tiller. Second, the boat can be brought into a turn at high speed without danger of skidding because of the gradual application of the turning force. As she gets further into the turn, the radius can be steadily shortened until the mark is taken as close as the skipper desires, with the minimum danger of a last minute skid or spin to cause a foul. Third, rough or rutted ice never yanks the steering control away from the driver, nor causes the rudder to be violently and suddenly turned in spite of the driver's best efforts. Finally the rudder stays where the driver sets it until he deliberately turns the wheel; this is all-important in a racing boat, where fast two-handed sheet trimming is often needed. In contrast to the tense, cautious steering necessary with a tiller, I have often sailed one whole leg of a course without once touching the steering wheel. Not only is this "pretty soft"; it is also

a tremendous advantage in competition. In a light air, the sheet can be tended as carefully as on a racing sail boat and the results never fail to justify such methods.

There is one bad practice in bow-steering design which has caused some mean spills. This is the inboard tiller, entirely inside the cockpit, running up between the driver's legs. The fact that such a set-up prevents sufficient turning of the rudder is adequately attested by the battered cockpit rails of every boat so rigged — mute evidence of the skipper's desire to turn the rudder more than he could. It is a highly dangerous arrangement, because it prevents the quick turn to windward or to leeward which is the best way to "set her down" in a sudden hike. Many a boat so rigged has come to grief upside down; more than anything else, the limited throw of the tiller was directly responsible.

To avoid this danger, wheel control is often used without the auto gear described above. In this type of rig, the steering cables are led aft from the rudder post to a point directly under the cockpit, where they come up into the boat over sheaves and are led to a drum on the shaft of the steering wheel. The typical outboard steerer is a counterpart. Icing up of steering cables and possible crossing and jamming on the drum are minor faults which can be avoided with careful maintenance.

Our bow-steerer's backbone thus takes shape. What of the stern-steerer? This time the girder is not so simple, for the crew's weight is carried almost directly over the rudder, hardly stressing the backbone at all, while the troublesome mast pressure is concentrated at a point some distance ahead of the runner-plank. It does not fall between two points of support, but stands out there on a sort of projecting bracket, called a cantilever in engineering parlance. There is, naturally, a strong tendency for the backbone to snap off short at the runner-plank. As a result, the backbone attains its greatest depth at that point and tapers gradually toward both bow and stern. The portion abaft the runner-plank has little to do but cannot be made too light because it will twist to excess, and will not afford secure mounting for the rudder post bearings. These, by the way, are similar in both types of boat and are either simple metal plates, drilled accurately for snug fit of the rudder post, or, sometimes, accurately fitted bushings mounted in regular shaft bearings.

Twist in the "stick" type of backbone can be largely eliminated by a return to pioneer ice boat design and the installation of wooden side rails, resting on the runner-plank forward, and brought together at the stern. The cockpit floor can be conveniently fastened to these and to the backbone, resulting in a simple and satisfactory hull for the small stern-steerer. It is safe to say that 90 per cent of the stern-steerers carrying less than 200 square feet of sail are of this type. Larger boats find the side rails unduly big and heavy and rely on built-up, hollow, backbones to eliminate twisting. Though satisfactory when new, these invariably rack themselves loose after several seasons and twist merrily. Of all the ways to go into a spin, this is the surest. The twisting action builds up until, finally, the rudder is yanked right out from under the boat — and away she goes. The crew often follows, unless their grip on handrails has been good.

The use of the boxlike fuselage to eliminate twisting and to give the crew a safe and comfortable riding position has long been accepted practice on stern-steerers in Europe. Americans have been slow to follow but there are definite signs that they, too, are growing tired of lying on their elbows, steering with their feet and frantically clutching at handrails with numb fingers — to say nothing of occasionally being unceremoniously tossed overboard. Such fuselages are built much like those of the bow-steerers but, because of the absence of great stresses in the span between rudder post and runner-plank, they can be of lighter construction than the bow-steerer. Again, the auto steering gear is highly recommended.

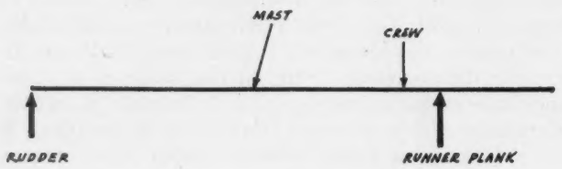
The runner-plank is a far simpler affair than the backbone. Basically, it is a simple beam, supported at its two ends and loaded at the center, where the backbone rests on it. This beam, however, is deliberately turned on its side, so that it will bend, rather than being placed on edge to support its load most economically. Bending is desired but, naturally, not too much bending. Hence we have a nice design problem: to produce a plank strong enough to carry all loads that will come on it and yet that will flex easily, to aid in carrying the weight of the boat over rough ice. A stiff, rigid, plank will carry the loads but it will transmit them, instantly and undiminished, to the cutting edges of the runners and cause excessive cutting-in, with increased resistance and a consequent loss in speed. Far better if the plank is flexible, acting like a broad, wooden spring, absorbing as much as possible of the mast kicks from hard puffs and, at the same time, giving a softly-sprung knee action type of ride to the main runners. This not only eliminates the loss of power occasioned by lifting the weight of boat and crew over every little bump but also prevents shaking or disturbing the set of the sail. Due to the fact that the bow-steerer's plank carries only half the mast load, while the stern-steerer's carries all of it, the former can employ a much "softer" plank than the latter. This is another "built-in" advantage which tends to make the bow-steerer the faster type.

In the days of old, before waterproof glue and lamination, the runner plank was often the most difficult part of the boat to obtain. Great pains were taken by the old-timers to cut just the right tree, to have the sawing done just so, to encourage natural warping and obtain a crown in the plank. Basswood, spruce and yellow poplar were used in various localities, and I have seen planks of ash, over 20′ long, and a full 6″ by 16″ at the center, along the Hudson River. Those were the days of tremendous boats, tremendous weight, and — tremendous inefficiency. Granted that these colossal old boats must have been awe inspiring, to say the least, their speed, except in a half-gale, was nothing to brag

A modern bow-steerer. Notice the bobstay strut under the backbone at the mast step and the slackness of the lee shrouds

about. Here and there along the river one or two of them still appear when there is ice and, though it is a thrill to sit in the cockpit and see all that oak and iron out in front of you, it is no joke to have to push one of them through a six-inch snowdrift. Good planks, capable of carrying these

STERN - STEERER

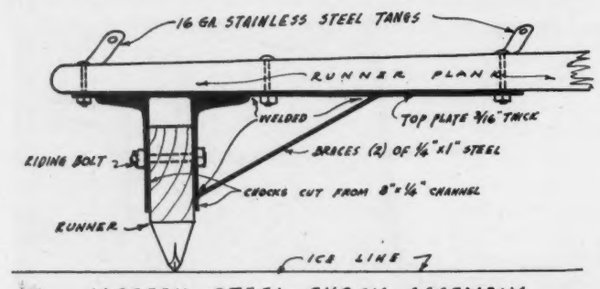


BOW - STEERER

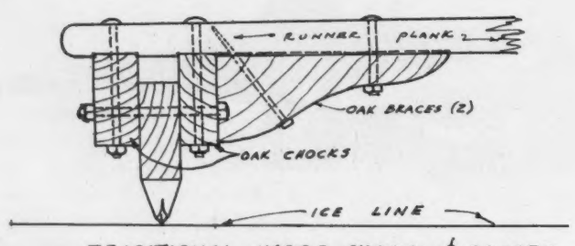
LOADS AND REACTIONS ON BACKBONES OF BOW AND STERN STEERERS

boats and their tremendous spreads of canvas, were almost literally jewels of great price.

The modern plank is far different. Almost invariably laminated, it consists of two or more boards — again Sitka spruce is tops — glued together and given the desired curvature before the glue sets. Once the glue has set, the crown is there for keeps. It is customary to taper the plank gradually, both in width and thickness, to the ends, since the maximum cross section is needed only at the point of maximum bending — in this case, the center. It is good practice to streamline the projecting portions of the plank on each side of the backbone, as these are constantly moving across the air-flow. Proper length of plank is vital to the success of the boat, as it has much to do with both stability and speed. Greater length of runner-plank gives: (1) Greater resiliency and spring for the same cross section; (2) a "stiffer" boat,



MODERN STEEL CHOCK ASSEMBLY



TRADITIONAL WOOD CHOCKS & BRACES

less apt to hike; (3) a less favorable hiking-angle, making a bow-steerer stand on her nose or a stern-steerer rear over backward in a hike.

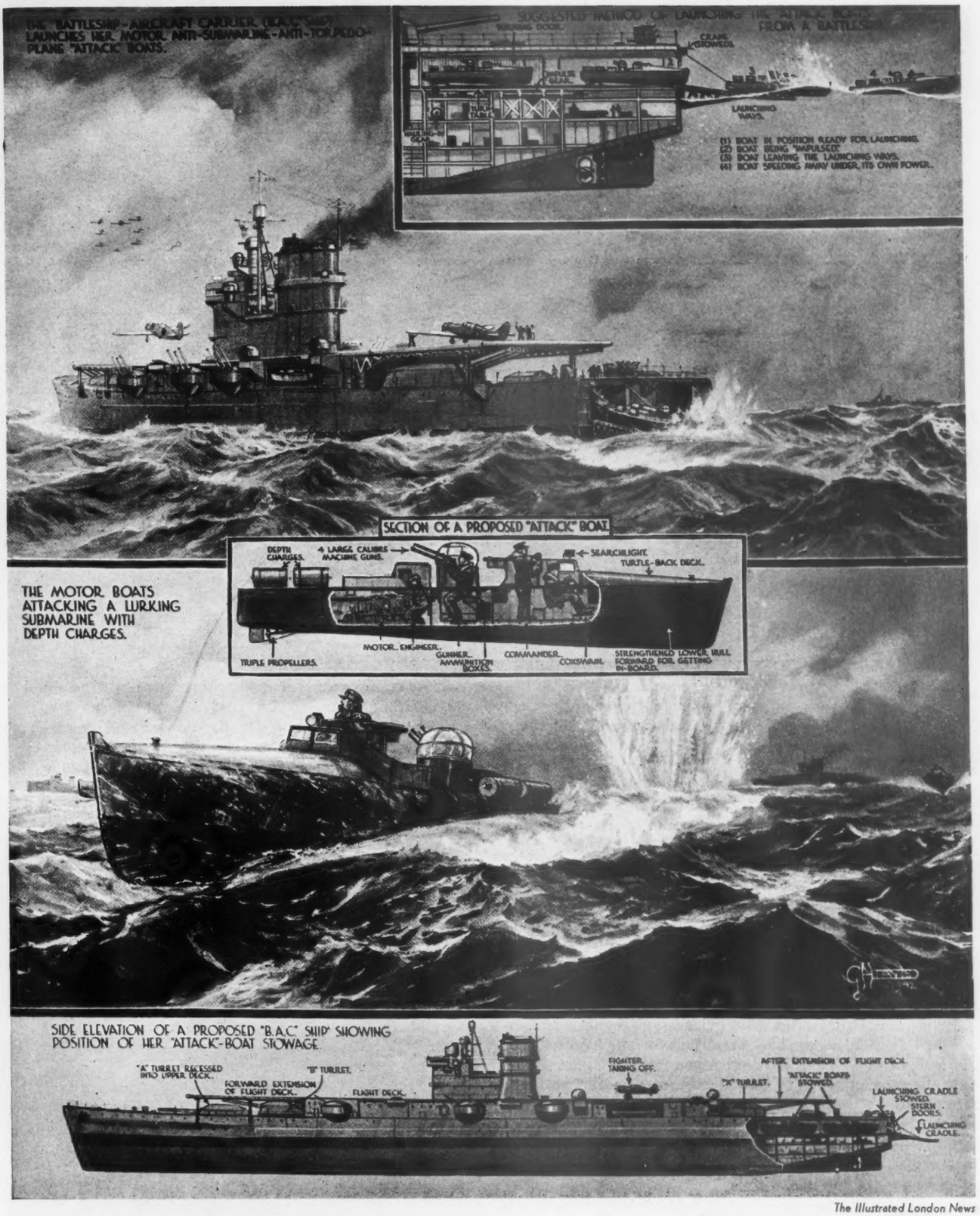
Number 1 is desirable in all boats but can be carried to a greater extreme of flexibility in a bow-steerer, as we have seen. Numbers 2 and 3 are mutually contradictory, bringing to light another one of those compromises which the designer encounters so often. The solution, of course, has been to retain the proper length required for stability, thus satisfying Number 2, and, by lengthening the backbone, to secure the favorable flat hiking angle which has proved so desirable in all boats. A typical Class E plank in 1937 was about 10′ long. By 1942, this had increased to 15′, and the backbone had been stretched out from 14′ to 22′! These big boats were far and away faster than the little early ones, yet the sail area was identical. The difference was due to longer, heavier backbones and longer, more flexible runner-planks.

The chocks, in which the two main runners are mounted, are, in their simplest form, two parallel blocks rigidly fastened to the under side of the runner-plank, and spaced so that the runners ride between them with a sliding fit. The inner block is braced to prevent it from breaking off or bending under when sailing, as it is the one which gets the greater stress. No major change has been made in the design of this part of the boat since the early days of the sport, and the old-fashioned quartered oak chocks are still giving satisfactory service on many an old-timer. Modern practice has cut down bulk and warping by the use of metal assemblies, either milled castings or built-up assemblies of rolled structural shapes. The latter, usually welded, are tough and resistant to breakage but should be braced as shown in the sketch. Castings, usually of aluminum alloy, can be accurately machined for the runners and, of course, will not bend — but, by the same token, they will — and do — break. Experience has led a great many ice boaters to prefer light steel assemblies, as the great strength of the material permits the use of thin sections, offering the minimum of slush-resistance. Just watch a modern boat, with thin steel chocks, zip through a snowdrift; then see what happens in the same spot to an old-timer with oak chocks. It does not take many repetitions of this performance to put a race "on ice."

The final qualification for our ideal hull was that it should be "shod with the fastest and most maneuverable runners possible." Just as the best racing car in the world is useless with flat tires, so the finest ice yacht is helpless without good runners. There are as many types of runners as there are ice boatmen and each skipper has his "pet" set, carefully polished and stowed away in oil for the "big race." Materials used run from the tried and true cast iron shoe with oak tops to shoes of T-iron, angle iron, stainless steel and even bronze alloys.

Cast iron, though prone to nick and hard to sharpen, still takes the finest polish and, in my experience, makes the fastest runner of all. T-iron blades are especially good in light airs on ice covered with light snow, through which they move with the minimum of resistance. They are apt to "chatter" in strong winds and are not recommended for heavy going unless made of really heavy T-section. Angle-iron blades are used in soft slush where their wide running faces help to carry the weight of the boat with a minimum of cutting-in. They cannot be sharpened easily, and will not hold an edge capable of preventing skidding on hard ice. Other trick runners are modifications of these basic types, and are efforts to provide a shoe which will enable the owner to get a sail on ice or snow that would normally make boating impossible. None of them are "regular" but many are extremely ingenious. I leave the pleasure of getting acquainted with them to you as you go along, but I wish to

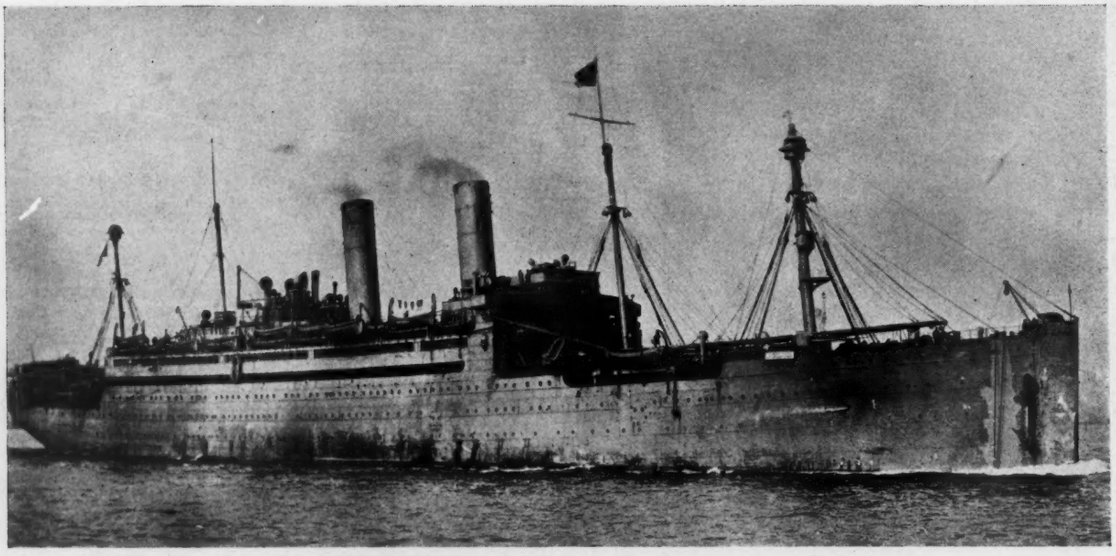
(Continued on page 110)


THE BATTLESHIP-AIRCRAFT CARRIER (B.A.C.) SHIP LAUNCHES HER MOTOR ANTI-SUBMARINE-ANTI-TORPEDO-PLANE "ATTACK" BOATS.
SUGGESTED METHOD OF LAUNCHING THE ATTACK BOATS FROM A BATTLESHIP
CRANE (STOWED)
LAUNCHING WAYS.
(1) BOAT IN POSITION READY FOR LAUNCHING.
(2) BOAT BEING "IMPULSED"
(3) BOAT LEAVING THE LAUNCHING WAYS.
(4) BOAT SPEEDING AWAY UNDER ITS OWN POWER.
SECTION OF A PROPOSED "ATTACK" BOAT
DEPTH CHARGES.
4 LARGE CALIBRE MACHINE GUNS.
SEARCHLIGHT.
TURTLE-BACK DECK.
TRIPLE PROPELLERS.
MOTOR.
ENGINEER.
GUNNER.
AMMUNITION BOXES.
COMMANDER.
COXSWAIN.
STRENGTHENED LOWER HULL FORWARD FOR GETTING IN-BOARD.
THE MOTOR BOATS ATTACKING A LURKING SUBMARINE WITH DEPTH CHARGES.
SIDE ELEVATION OF A PROPOSED "B.A.C." SHIP SHOWING POSITION OF HER "ATTACK"-BOAT STOWAGE
"A" TURRET RECESSED INTO UPPER DECK.
"B" TURRET.
FORWARD EXTENSION OF FLIGHT DECK.
FLIGHT DECK.
FIGHTER TAKING OFF.
AFTER EXTENSION OF FLIGHT DECK.
"X" TURRET.
"ATTACK" BOATS STOWED.
LAUNCHING CRADLE STOWED.
STERN DOORS.
LAUNCHING CRADLE.

The Illustrated London News

THE ALL-PURPOSE SHIP OF THE FUTURE?

To achieve maximum combat effectiveness, what should be the characteristics of the future capital ship? Here G. H. Davis, well-known British naval artist, projects a B.A.C. ship (Battleship—Aircraft Carrier) which fills the specifications of Vice Admiral Helfrich, C-in-C of the Royal Netherlands Navy, who said that: "A combination of airplanes and big guns on big capital ships will bring the most effective success." Mr. Davis proposes additional weapons in the form of four fast "attack" submarine chasers 40′ O.A. These boats would each carry a crew of four, have a speed in excess of 40 knots, and be equipped with A.A. guns and depth charges.



The "George Washington," built in 1909 as flagship of the North German Lloyd, ferried nearly 100,000 American troops to and from France and also carried President Wilson to the Peace Conference

WAR IS HARD ON OLD LADIES OF THE SEA

By

CARLOS C. HANKS

THE heavy blanket of wartime censorship has carefully cloaked the comings and goings of the old liner *George Washington*. It may be that she is no longer afloat for, when the U. S. Maritime Commission turned the big ship over to the British under the provisions of the Lend-Lease Act, it was a foregone conclusion the elderly dowager of the sea would again plough waters of danger as a transport or auxiliary cruiser. The transfer also meant that she would fly the third national flag in a long and eventful life.

The *George Washington*, her seamen used to say, was a stylish hausfrau. She sailed from Germany on her maiden voyage 'way back in 1909, an able ship with fine sweeping lines. And she knew how to make her curves count. She could carry more cargo than any other liner of her heyday, and far more than the luxury ships of the 1930's.

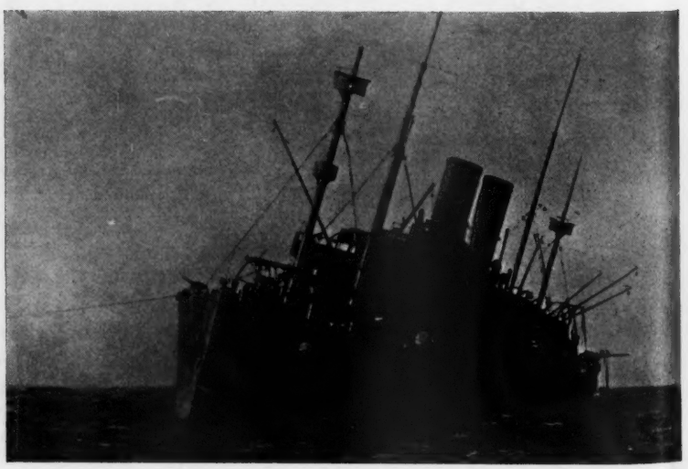
Before her return to the grim business of serving a people at war late in 1940, she had already lived four lives at sea. She was, in turn, the most commodious Atlantic liner, probably the most crowded of United States troop transports, a refitted class vessel and, finally, a one-class cabin liner.

After her service as a transport, there followed eight years during which she swung unused at anchor, her paint yielding to the bite of rust, her vast hull possessed by an abiding silence and cavernous shadows. Then, in January of 1940, she was offered for sale as scrap, with three other liner companions of her time on the Atlantic, but the bid of $286,715 for the four, submitted by an English shipbreaking firm, was rejected as insufficient by the Maritime Commission.

So the gallant old liner continued to swing at her backwater anchorage in the Patuxent River off Solomons Island, Maryland, for a few more months. From a distance, her rusted hull appeared to rise out of a cornfield, a sort of relic and reproach to a nation which becomes merchant marine conscious only under the lash of a great emergency, or when a crisis in some other part of the world creates a demand for cargo bottoms by American business.

In her youth, the *George Washington*, 700 feet and 23,788 gross tons of liner, was the flagship of the North German Lloyd Line, and she steamed at the head of the merchant marine section of the world naval procession off England at the coronation of King George V. Once the German Kaiser inspected her, and once she carried the King and Queen of the Belgians to America. Aboard her, too, it is said, the present Belgian King Leopold, now a prisoner of the Nazis, learned to shoot craps under the expert tutelage of American naval officers. Twice she carried President Woodrow Wilson

(Continued on page 104)



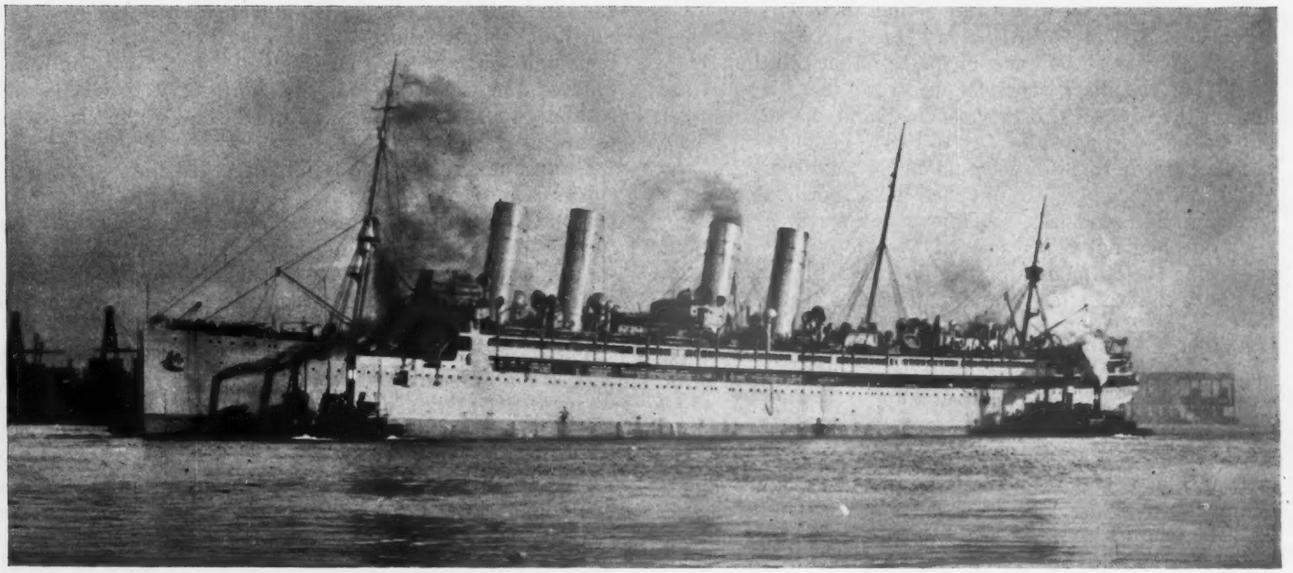
The transport "Covington," homeward bound from France, when she was torpedoed by a U-boat some hundreds of miles at sea

The transport "America" was a former German liner which carried thousands of our soldiers across the Atlantic in the first World War

Levick from Frederic Lewis

Boat drill was always a headache. Troops occupied practically every square foot of a transport's decks, swarming all over her. Bunks for the soldiers were arranged in four tiers to accommodate the great number of men which were carried

Bottom, the "Mount Vernon" was another "Heinie Boat" converted from a luxury liner to a transport for United States fighting men



MUTINY IN THE "AMISTAD"

Part III—The End of the "Ghost Ship's" Voyage

By MARGARET WALLACE

THEY had a long way to go if they were to see Africa again. The gold would buy fresh food and water from any ship they encountered, possibly even the services of a navigator. Except for water, they would not need much in the way of fresh stores for some time. The night's looting had revealed an apparently inexhaustible quantity of goods of all sorts. Some of the cargo was useless for his purposes — mirrors and glassware and the like — but there was plenty of food aboard.

Cinque, for his own part, was resolved to see Africa again. In his own country he had been a peaceable young man, with a wife and three children and a modestly prosperous rice plantation. But the determination to escape had grown in him like a passion since the day when he had been kidnapped out of his own rice field and sold into slavery. Mutiny and seizure of the ship had formed no part of his original intention. That had come about without premeditation in the frenzy which followed the cook's taunt that they would be eaten at Guanaja — a taunt which, as Grabeau said, "made our hearts burn."

Now that the die had been cast and the captain and cook were killed, he laid his plans for the return voyage. He knew that his own life would be forfeit if they should be taken again by white men, whom he described as "the enemies of our race." He did not expect a hearing from them, and certainly not mercy.

Grabeau and Banna had stood beside him in the first attack. He laid his plan before them now, as his trusted lieutenants. Banna had been a blacksmith by trade. He was useful for his physical presence, which was burly and competent, and for his smattering of English. Grabeau was an active and wiry little man, hardly five feet tall, with a short, tightly curled beard. He was in his forties, somewhat older than the average among the *Amistad* slaves, and had a reputation for wisdom. Like Cinque himself, he had been a rice planter before he had been sold into slavery to satisfy a debt contracted by his uncle. The post of second in command devolved upon him.

They were agreed with Cinque that their only hope lay in reaching Africa. And Africa lay three moons to the eastward. That was all he knew of their present position. They would sail the black schooner eastward then, toward the sun, for three months. If they touched land or spoke another ship he would inquire the way to Sierre Leone. White men in this part of the world would never have heard of the Mendi village where Cinque had been born. But Sierra Leone, on his own coast, was known to everyone.

Cinque had not really needed Don José's advice about preserving the old man's life. He had thought of it already, that both the white men could make themselves useful sailing the ship. He did not trust them, naturally. Don Pedro Montez in particular he would have been glad to be rid of, and he would kill either of them at the first suspicion of treachery.

He prodded Montez and Ruiz awake with his foot and cut the lashings that bound their wrists together. Don José yawned widely and rubbed the stiffness out of his joints before he stood up. The older man groaned feebly. The bandage around his head was caked with blood and his wounded arm had stiffened so that he could scarcely move it. He was slow in getting to his feet. Cinque seized him by the collar, jerked him upright and marched him aft to the helm.

The sun was above the horizon, streaking the clouds with silver. The big Negro picked up Don Pedro Montez's hand and placed it on the wheel. Then he pointed toward the sun and said something in a language Montez did not understand. With a wide gesture he included all the ship in the commanding sweep of his arm and pointed again at the sun, stabbing with a dusky forefinger. The old man shook his head painfully, blinking because his head throbbed and the light hurt his eyes.

The black mutineer drew one of the pistols from his belt and jabbed it into Don Pedro's ribs, making him flinch and cry out. They were going to kill him after all, he thought, and began to pray aloud. Don José spoke quietly at his elbow.

"He will not hurt you, I think, if you do what he wants. He wants you to sail east, toward the sun. I think they are planning to go back to Africa. Try to take the wheel for a while, and then I can relieve you. If you show me what to do, that is."

Squinting against the light, Montez glanced at the masthead. While Cinque glared critically, he put the helm down and the schooner came round, her sails flapping and filling in the light breeze. Fighting against the wave of faintness and nausea which came with the effort, Montez laid the black schooner on the starboard tack for the coast of Africa three thousand miles away.

\+ + +

At the beginning of the nightmare voyage, Montez had no intention of sailing for Africa. He confidently expected to fetch up on the much nearer and more welcome coast of Andros Island, which lay to the northeast across the shoal waters of the Great Bahama Bank.

The big negro had pointed to the rising sun when he laid down his sailing directions and enforced them with the pantomimed threat of death. Such a course at this season would take them not due east, as Cinque apparently believed, but northeast toward Andros. To the east there were only barren reefs and low, scattered coral islands, many of them uninhabited and waterless. But the shores of Andros, sparsely settled though they were, afforded some faint chance of escape or rescue.

Sailing in any fashion at all presented unforeseen difficulties. Cinque was bitterly distrustful of the white men. Under the strain of the responsibility he had assumed, his temper was violent and uncertain. For a farmer, he was surprisingly innocent of even the most elementary facts of astronomy, sure of nothing except that the sun rose in the east.

The course he desired lay generally to windward, and the impossibility of sailing directly into the wind was something he could not at first comprehend. He cuffed Montez aside with a brutal sweep of his hand and seized the wheel himself, sure that there was treachery in the failure to obey his instructions to the letter. The confusion produced by his own floundering efforts, and the explanations and diagrams patiently propounded for him by Don Pedro Ruiz, reluctantly convinced the big mutineer that he was no sailor and

In the Old Bahama Channel, the schooner ran into a blow. Her headsails were blown to ribbons and her topsail yard broken

must depend upon the white men for working the ship.

The trim little *Amistad* presented a scene of general rejoicing and African domesticity. Every black in the ship promptly took up his residence on deck, eating and sleeping there, grumbling, carousing, or quarreling according to his mood, stirring himself to obey an order from Cinque or Grabeau when it was backed by the threat of the lash. On the second day after the mutiny, the *Amistad* ran into a hard gale. She took a severe battering and, inexpertly handled as she was, survived mainly by good luck.

The drenched and frightened Negroes, roused out by Cinque to handle the sails, succeeded in getting in the fore and mainsails. The jibs were blown to ribbons and the topsail yard carried away, taking with it a hapless black who had given up the struggle with the threshing canvas and clung shivering to the yard. The rest of the Negroes packed themselves into the cabins or retreated to the damp and filthy hold.

By the time the gale blew itself out, it was clear that they had missed Andros. They had been driven off their course and far to the south. Three or four days later they sighted the low palmfringed shores of Green Key in the vicinity of Columbus Bank. Here they dropped anchor and the Negroes went ashore in one of the boats to fill the water casks. The white men were kept aboard under careful watch.

Montez had lost track of the days since the mutiny. Something like a week elapsed before they made a second landfall on an island he recognized as New Providence. With the first lively hope he had felt since the slaves seized the schooner, he headed her for Nassau Harbor. Cinque, however, smelled danger and refused to allow him to enter port. He insisted that the anchor be dropped well offshore. And when another ship passed close enough to speak them, as happened two or three times, he ordered Montez and Ruiz out of sight below and set guards to see that they made no appeal for rescue.

The schooner left the vicinity of New Providence and coasted southeastward along the fringe of low coral keys. At night they dropped anchor in the shoal waters and everyone aboard turned in until morning. They spent three days off Long Island, where they took on fresh water and obtained a supply of meat and fruit from a passing schooner, paying well in gold doubloons.

Cinque ruled his ship with force, striking swiftly and hard where force answered his purpose. But the dusky young rice farmer, who had never been away from his native fields before, was born leader enough to recognize that force has its limitations. He could not govern indefinitely without the consent of the governed. Already there was restlessness and grumbling among the slaves. The first wild orgy of freedom had been followed by boredom. Longing glances were turned upon the palm green shores. He had caught rumors of half-formed intentions to desert. Time was running out.

From now on there would be a new order aboard the *Amistad*. There would be no more shore excursions, no more comfortable anchoring at night, no more idling among the coral keys. The two white men would sail the ship at night, and by day with the sun to guide him, Cinque would see that she was kept on her steadily eastward course.

The hope Montez had cherished of making a landing

among the Bahamas flickered out. But a new plan born of desperation took root in his mind. He outlined it to Ruiz on their first night watch. By day, when Cinque's eye was upon them, they would sail eastward. At night, as soon as the negroes were asleep, they would come about and sail west or northwest. Also, on any day when the sun was not visible, they could sail westward. This plan, he explained to Ruiz, had a double advantage. Any naval vessel of any nationality which noticed their erratic behavior would be likely to stop and search them. And sooner or later, if they persisted in their zig-zag course, they would be bound to fetch up somewhere — not Africa.

+ + +

The little schooner reeling on her drunken course across the open Atlantic bore small resemblance to the trim, seaworthy *Amistad* which had cleared from Havana late in June, 1839.

Nothing remained of her former grace but the long clean lines her Baltimore builders had put into her. Her jibs were gone, her topsail yard had been carried away. Under the tropical sun, the paint was flaking off her black hull. The spread eagle of her figurehead still showed scabrous patches of gilt. Her chain plates trailed beards of seaweed and her sides below the water line were foul with barnacles.

She had shipped plenty of water during the gale which struck on the second night after the mutiny. Broken bales of cargo, which had been spread to dry, still cluttered her decks. With her stained and torn sails, her shattered gear, her barbaric and half-naked crew armed with cane knives and cutlasses, she shambled back and forth across the Atlantic while the weeks of summer slipped away. Pirate or pest ship, she had come to look and smell the part.

Since the blood stains of the mutiny had been washed from her decks, there had been no attempt at order and cleanliness. Nothing was repaired or replaced. Cinque allowed his miserable followers to live as they liked, enforcing discipline only when his main object of returning to Africa seemed threatened. He knew nothing of seamanship, and the two white men cared nothing. As the schooner became slower and less manageable, their chances of rescue improved.

Since no alternative presented itself, they stuck doggedly to the plan suggested by Montez. By day, under the eye of the resolute Negro, they sailed east for Africa, coming about after nightfall and heading west or northwest. Prevailing winds and currents favored their northward course. Without knowing their position, for he had lost all track of time, Montez believed that their progress had been generally north and west. Don José Ruiz was not enough of a sailor to judge what might be expected of wind and current. But he realized that the appearance of the ship would be sure, sooner or later, to excite the curiosity of some naval vessel.

This was their chief remaining hope. So far, Cinque's vigilance had never relaxed. They were both hustled below whenever a ship came within hailing distance. Several times, the Negroes had traded with passing vessels, distributing doubloons lavishly in payment for water and supplies. At other times, Cinque, hag-ridden by his frantic desire for speed, stood beside the helmsman pistol in hand and kept the schooner on her course. Sailors reported the strange black craft, silent as a ghost ship, briefly glimpsed in the twilight and slipping away without revealing a clue to her identity. She dropped anchor off the coast several times. Perhaps twenty times, Montez said later, a little wildly.

Nearly two months had elapsed of the three Cinque originally believed they would need to reach Africa. Eleven of the slaves, almost a quarter of the company which had seized the ship, had died already through illness or accident. The rest were growing daily weaker and more emaciated. Some of them spent most of their time lying curled up on deck, indifferent to their surroundings, scarcely moving to carry out orders even under the threat of the lash. Only the children, the three little girls and the eleven-year-old Ka-li, seemed to thrive in the pestilent atmosphere of the ship. Cinque, when he chose, could still arouse his crew by eloquence. But they quickly dropped back into apathy or grumbling discontent. The foreboding was heavy upon him that they would never reach Africa.

Three times in a week they had encountered other vessels. Cinque had been glad to buy water from the first ship and had accepted a tow. After several hours, she had cut her towline and disappeared in the fog. During the next five days, he saw an occasional sail in the distance. Then two smaller vessels, within an hour or so of each other, hailed the *Amistad*. Cinque did not know them for pilot boats, but he stood at the rail with drawn pistol and cutlass to keep them from boarding him. Yet he saw that his own men were disappointed. Except for his presence, they would have welcomed the white men.

Later that same day, shortly after nightfall, a light gleamed on the horizon. It was almost dead ahead, where no light should be. Cinque stared at it coldly for minutes. It disappeared and then appeared again, plainer each time. It was far too bright to come from any ship. He turned to little Grabeau at his elbow and said shortly: "We have been tricked."

+ + +

The day was the 24th of August and the light was Montauk. Montez put the wheel over and headed straight for it. It seemed to him that his only remaining chance lay in running the schooner hard aground. The Negroes, who had heard their leader's words, had formed a ragged circle and raised the death chant. This time they were so thoroughly aroused that both white men expected to be murdered.

The schooner drifted with the tide past Montauk Point and into the Sound. The Negroes dropped anchor not far from Montauk, at a place called Culloden. Early in the morning on Sunday, the 25th, Banna and two half-naked blacks went ashore for water. Approaching some houses, they obtained water and bought two dogs for three doubloons apiece.

Rumors of their presence flew about the countryside. Among those who had been stirred by newspaper stories about the suspicious-looking craft and her strange crew was a certain Captain Henry Green, whose curiosity was not idle. With visions of salvage dancing in his head, Captain Green rounded up his friend Captain Pelatiah Fordham and several neighbors. They armed themselves suitably and drove over in wagons from Sag Harbor on Monday morning.

They saw cooking fires on the beach and a group of Negroes, some naked except for handkerchiefs twisted about their loins, others with blankets thrown over their shoulders, gathered around the fires. Still others were lying down in the long grass at a little distance away. Two or three of the blacks came forward to meet them, and their spokesman inquired in difficult but recognizable English: "Have you rum?"

The black displayed some Spanish gold, indicating that there was more to be had, and Captain Green obligingly sold him a bottle of gin. Cinque, who was aboard the schooner, was sent for. As soon as he was rowed ashore, he instructed Banna to ask if this country where they now were made slaves. The reply was: "No, this is a free country."

"Are there any Spaniards here?"

"No."

At this Cinque whistled shrilly and all his men sprang up

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A yachtsman's paradise. Nevin's yard in the spring

WHAT EVERY WOMAN WANTS

Some Pertinent Thoughts on What To Look for When Buying a Boat, by a Woman Who has Been There

By RUTH BRINDZE

THE trouble with many dream ships — and with some real ones — is that they lack a woman's touch. Whenever the conversation turns to the buying or the building of the perfect ship, it is the men who do the talking. This is a mistake. For women have their dreams, too; as a matter of fact, their dreams are apt to be extremely practical. Combine the male and female dreams and you'll really have something.

What a man wants in a boat is a pretty old story. Design, size, rig, motor, these are the things he talks about. Obviously, they are important. But a boat has to have more than a fair turn of speed coupled with sea-kindliness; she has to have more than a well designed and easily handled rig. To be really perfect, she has to have comfort in the cabin. And this is where the woman comes in. This is the department she knows even though she has never been afloat in her life. She may know nothing about marine interior decorating or design but she can tell if the results are good. So, if you have a mate, Skipper, and hope to sail with her, let her be present and vocal when the dream ship is being conceived or bought.

Builders and designers of stock motor boats were the first to aim at pleasing the ladies and from this praiseworthy endeavor has flowed many benefits for small boat sailors of both sexes. The motor boat industry went ahead and built cabins that are comfortable to live in and good to look at. Subsequently, designers of auxiliaries followed suit, but it was the motor boat men who proved that modern design can make a small boat a real home on a keel. This is what sold the ladies back in the days of motor boat shows. Remember the long lines waiting at the gangways of the 30- and 40-footers to get a peep at the cabins? And many a contract was signed because the mate liked the smart little galley or some other similarly important feature.

The twofold result was that the mate took to cruising and the skipper enjoyed his comfort. Maybe there are men who like things rough rather than smooth, but their number is few. I have never yet heard a man complain of too much comfort.

Comfort, of course, means different things to different people at different times. The word is not susceptible of simple definition. But, when I mentally step aboard my dream ship (or when I look over a real ship), this is what I mean by comfort.

First of all, I want to be able to stand up straight in the cabin, and I want friends and relatives of the six foot variety to be able to walk upright as the good Lord intended. Modern designers know how this can be done even though occasionally they compromise and provide sailors with

A fine example of a well equipped galley. Well laid out and well ventilated. Everything handy for the cook

headroom only when they are in the doghouse. In a small boat, this two level arrangement seems ugly to me from the exterior and cruel on the inside. For there are few whose reactions are sufficiently sure and quick so that they will always know when they must duck and when they can keep their chins up.

Complete privacy in a small boat is achieved only by single-handed sailors. But a cabin can provide the degree of privacy needed for civilized living. There is, for instance, the seemingly trifling detail of privacy when dressing or undressing. Sure, you can play "shut eye" when there are females in the party. "Shut your eyes, Tom," or, "Turn your back, Dick," the mate's about to climb into pajamas or bathing suit. It's been done, and I've done it, but it's handier to have some other arrangement. In a boat sleeping three or more, I would certainly want some means of shutting off the forward stateroom from the main cabin. A curtain would do, or a locker or toilet room door which could be opened out, cutting off the view between the forward and after portions of the cabin, would be better. I would not have a fixed door dividing the cabin because of its adverse effect on light and ventilation.

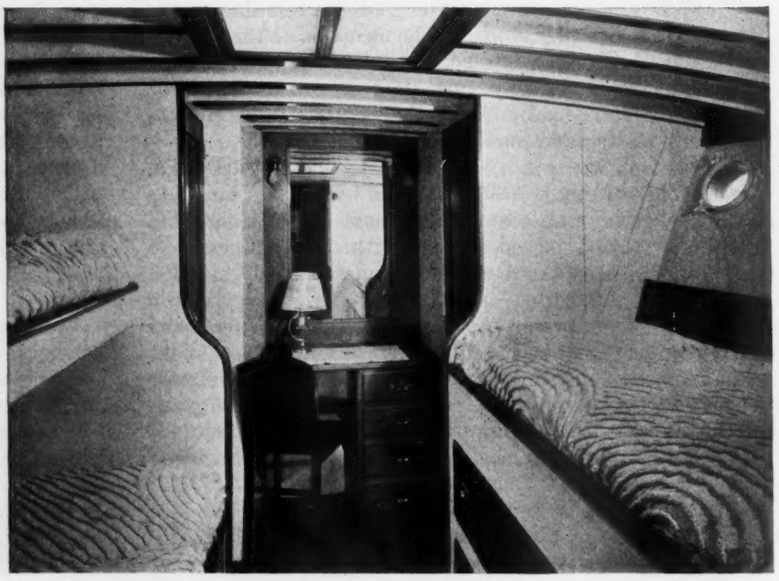
But there must be a full length door and full headroom in the toilet room. The privy, in other words, must not only have privacy, its design must be functionally right. I have seen rooms that looked cute but that apparently were designed for midgets or contortionists. And if this sounds like one lady's nightmare, just look around, mates. You'll see what I mean. In my comfortable cruising ship, the designer must not only allow space enough for the essential fixtures and an averaged sized human being, but the room should include some of the convenience features of the "powder room" ashore.

On the bulkhead I want a medicine closet for stowing the necessary first aid supplies as well as the toiletries carried by both men and women. I want a mirror door on the medicine closet so that I, and others in the party, can see clearly when our aim is to improve on nature. Below the mirror or within easy reach there must be a shelf so that a woman working with powder and paint, or a man with shaving brush and razor, does not have to juggle equipment.

The bathroom ashore has a closet for clean towels and a hamper for soiled ones and, on my comfortable cruising boat, I'd like similar stowage facilities. This is not an original idea; there are many small cruising boats with such stowage space but my guess is that it was either a woman who first thought of installing a seagoing clothes hamper, or a man who had his mind set on pleasing the ladies. Another good feature of landlubber construction which has been copied is the use of tile on the toilet room walls. Seagoing tile is of the composition type which is both light in weight and easy to install. I like it, not for its eye appeal but because it is downright practical. Toilet room walls must be washed down more frequently than those in other parts of the ship, and painted surfaces will stand just so much washing before the paint begins to wear away. The right kind of tile stands up better under a soap and water treatment. A good deal of time has already been spent looking over the toilet room but, before leaving this vital section, it should be added that there must be adequate natural light, and good ventilation. And, if an acoustical engineer could devise some method of soundproofing, that would be a real improvement.

Old time cruising men have always done a lot of talking about food but, upon analysis, the epicurean highpoint of the tales frequently turned out to be a clambake, or lobsters cooked in the dishpan on the beach. Ashore, the cook had the scope he needed which he definitely did not have in the galley. Galleys certainly have improved since the days when the stove was set somewhere in the forepeak and the ice box fastened in front of the motor. In a comfortable small ship, it can have the efficiency features of a modern kitchenette, and this is what every cook is entitled to.

(Continued on page 112)



What every woman wants. A fine example of milady's boudoir in a power cruiser

Democracy at work. All hands pitch in to help launch a Starlet

TILLERS FOR THE TEENS

The Advantages of Providing Small Boats for the Youngsters

By CURTIS ZAHN

WHAT to do with yachting's *Juniors* — those turbulent 'teen-aged offspring of the men who sail boats? For years this question has represented a standing maritime problem. From Long Island to Los Angeles, yachtsmen in good standing have found time to have children. Indeed, the intervals between them have been all too infrequent and club verandas have been overrun, and, possibly, undermined, with youths who get into everything, including the commodore's ice box. The policy in most clubs has been, and still is, to laugh off their antics. But laughter becomes hollow when somebody's boy administers several gallons of water with somebody else's bilge pump. No wonder skippers have been stalking around with protest flags in their pockets.

With this state of affairs rankling in their minds, a group of Pacific Coast yachtsmen, whom we shall not identify, met one rainy mid-winter night and plotted a course. Put them in sail boats, they reasoned, and they might get becalmed out there. And if they were becalmed, the clubhouse would be safe, sane and, possibly, quiet.

And that's how the American Starlet Association was formed.

It was just after the memorable event of 1929 that the perfect boat was found. She was sixteen feet long and five feet wide and was called *Starling* — derived from the Star boats she resembled. She sailed fast, but not so fast that two boys might not take all afternoon to get back to the club. There was the added advantage that *Starling* could get stuck in the mud. (She drew three feet — more than some of the boys drew.) The plans came to the attention of George Kettenburg, designer of the now famous PC sloops. Mr. Kettenburg took off a few pounds here, added a few inches there. Out came a neat, able, non-sinkable sloop which can be built for around $300 at your nearest boatyard. And, if neither boatyard nor prosperity is just around the corner, you can build one in the backyard. Many boys have, and their boats win or lose just as many races as store models.

The sons of a power boat man built the first one. Next came descendants of an "R" boat skipper, a naval officer. By 1933, there were ten of these one-design boats; in 1934, there were twenty-one. The present figure is forty-three and they're distributed among several coastal cities.

Rub two or more Starlets together and you've got a race. A copy of the International Star Class rules was revamped to suit the requirements of 16-foot boats sailed by 16-year-old boys. The first additional rule was this: Parents must be conspicuously absent. One adult per year is permitted to serve as sponsor and race committee but his only oral manifestation is calling minutes and firing the starting gun. Meetings, general or protest, are run by the junior commodore. He is assisted by that august body, the supreme court, composed of nine (*not old*) men. This committee ordains that practically every Saturday and Sunday shall be race days. The season goes year 'round, determined only by the duration of school or war. This summer, due to restrictions forbidding sailing "outside," the class is more active than ever.

Before the start. Starlets maneuvering for position. Some of the boats are too early and their skippers zigzag to kill time and not cross ahead of the gun

The youngsters are always ready to eat. Below, skippers and crews —crew usually means younger brother—enjoy a barbecue on the beach and discuss the race

'Teen age tillering is a democratic affair. The crew does half the work, skippers half the races, gets half the trophies. The crew worries just as much as the boat owner and, for this reason, perhaps, gets into less trouble around the club. The boys, by the way, have their own club. It's a group of former lockers in the old part of the building now converted into bunkhouses and protest tables. The members sold shares of stock (security being the knowledge that their effervescent activities would explode behind closed doors or on the high bays). They took the money and went to work. Today, a kangaroo court administers oars to the transoms of any who cause trouble for adult yachtsmen.

It is within the soundproof walls of this sanctum that Brother Rat is initiated into the strange rituals of lighter than air propulsion. If he survives the first two weeks, he may grow up to sail Star boats. If not, better join the Friendly Indians. Starlet traditions are Olympian. Each and every race winner is joyously launched into space upon finishing and must swim home. Newcomers' boats are set adrift and it's only after rowing or swimming frantically that the "pledge" finds someone hiding in the cockpit, steering. Buckets long have served as secret sea anchors. Main sheets develop mysterious snarls. Spinnaker poles and jibs disappear until just before, or after, a race. Yet the boys sail happily on, each getting his just or unjust deserts.

Cruising is another feature of the association. Loaded to the decks with hot dogs, sleeping bags, soda pop and boys, the little ships take little overnight cruises "somewhere on the bay." Formula is to drop anchor off some sandy beach, row ashore in the one overburdened skiff and eat. They build a fire, sing, talk and eat some more. Tiring of that, they just eat. To date, the cruises have been one hundred per cent satisfactory. The only serious mishap occurred when an entire case of soda pop turned up missing. The boat on which it was stored was also missing until next day when the races started.

On long cruises, they hitch-hike. What yachtsman hasn't been witness to (or worse, participated in) the towing of ten or fifteen of the tiny sloops to a regatta? On long trips through open sea, the fleet sometimes sidetracks the issue by being piled aboard a barge. On other occasions they have cruised to regattas on trailers or trucks. At any rate, the turnout at Santa Barbara and Los Angeles regattas always adds up to more than two dozen boats. Once the entire fleet was stored aboard a coal barge and towed 200 miles. The boys pitched tents and lived aboard for nine days. The first race off the channel city saw seven boats capsize; the second, only three. In the end, Starlets were still going in water in which even Stars and Skimmers feared to tread. This event led to the jest that "there is always a good turnover in Starlets," but it proved them able when properly handled. And it proved that their youthful skippers were also able, when properly handled.

The Starlet summer months are an exciting succession of races. The skippers' round robin is an event in which boats are swapped and sailed in sixteen or more races — all in one day. Try it some time. You'll see why the boys don't get into trouble. Skipper and crew series run half the year. Added to these are special events, up to and including the

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UNDER THE LEE OF THE LONGBOAT

By "SPUN YARN"

NOPE, I don't give you any weather this month. But I do give you a Happy New Year and the hope that all of you have just the assignments you want for making the world unsafe for jerryjaps.

The more cheerful news of the year's end has started some of us to thinking again of sailing for amusement, and the thought has been expressed that 1944 will see the resumption of the Bermuda race. Perhaps the wish is father to the thought. Putting it another way, the thought is certainly a son-of-a-wish.

I was amused the other day to read that some writer fellers almost came to blows over whether or no to hate our enemies. I was amused because just now we ought to devote all our thought and energy to bopping them. When they're sufficiently bopped, they'll ask for an armistice — and that is when we ought to concentrate on hating them. If we don't hate them then, they'll stir our sympathies the way they did the last time — and in another twenty years we'll have it all to do over again.

A more lively subject for discussion is what to do with Hitler when the herrenvolk and their Asiatic blood brothers holler "uncle." We're too soft-hearted to starve the little man to death, or to set him adrift without water in a rubber boat. But the lads I see the most of are thinking seriously of setting him to sweeping mines for the rest of his unnatural life. It is, of course, understood that we members of the Mine Sweepers' Local will have no say in the matter if old Doctor Joe Stalin visits Adolf first and writes his own prescription.

You know how rumors spread and become tales that are well-nigh incredible. But here's one close enough to the source to bear some resemblance to the truth. It appears that a small Navy patrol boat that had seen far better days and was full of dry rot got caught out in a gale of wind and had to fight for her life to get in. In fact, she mightn't have made it at all if one of her officers hadn't reached into the spud locker and plugged up the more accessible holes in her bottom with sweet potatoes of assorted shapes and sizes. While doing same, our hero was heard to exclaim: "Praise the Lord and pass the sweet potatoes," thus originating a famous saying that has since been paraphrased.

I also give you the yarn about the inspector of navigational equipment and the deviation table. He noticed the table neatly framed near the binnacle of another little boat and said to the boatswain's mate in charge that there must be some mistake. Who had ever heard of a compass aboard a small auxiliary that showed no deviation on any point of sailing? The boatswain's mate cocked an eye at the deviation table, noted that it showed zero deviation every fifteen degrees from 0° to 360°, and remarked: "There's nothing wrong with the table itself. Only thing is it belongs to a compass they took away from us and gave to some other boat."

I haven't been doing any navigating lately, what with the difficulty of keeping accurate time aboard small mine sweepers, but now and again when a buoy is brought abeam I break out the sextant and take a sight to keep my hand in. One morning, I waited until the waning moon seemed to be about as low in the western sky as the sun was high in the east, and got three sights of each. Calling out the angles, I I was pleased to note that my eye hadn't failed me and that the altitude of the two bodies agreed within a few minutes, each being 14° and a little more. Some time was spent checking the rates of rise and fall to make sure that my angles were consistent, and then I turned to and worked a sight of the sun, that being a little less complicated than the moon. Imagine my disgust at finding that the intercept was 20 miles.

Well, there's one advantage to using the cosine-haversine method as opposed, let us say, to H.O. 211. Being uncertain of my time within ten or fifteen seconds, I worked the sight backward to find out how much the watch would have to be in error to put me 20 miles away from a known position. It worked out to about two minutes — which was ridiculous on the face of it. Even more ridiculous, I then discovered, was the fact that I had shot the moon two minutes before I had shot the sun and had worked a moon sight as a sun sight.

I admit that it was a slovenly piece of work, and I shudder to think of what would have happened if I had been navigating a fast plane and had had no reason for being suspicious of an intercept of 20 miles. But, with my apologies

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The Skipper in a contemplative mood

PRAISE THE LORD AND TRIM YOUR SHEETS

Wherein a Gentleman of the Cloth Demonstrates That It Is Not Such a Long Jump from Pulpit to Cockpit

By "PERSONNE"

WILLIAM McKINLEY was President; American troops were fighting in the Philippines against the insurrectionists; the Boxer Rebellion in China and the Galveston flood took thousands of lives and rich Americans were crossing the "pond" in fast steamers in as little as seven days, going to the Paris Exposition. *Columbia* had just defended successfully our title to the America's Cup against *Shamrock I;* the 70-footers and 21-foot raceabouts were competing actively off Larchmont and such names as *Queen Mab, Isolde, Astrild* and *Vigilant* were prominent in the yachting news when a lovely little sloop slid gracefully down the launching ways and took the water at the yard of the George Lawley & Son Corporation, South Boston, Mass. She was from the board of B. B. Crowninshield and had been designed for Edward Morrell. Her home port was Bar Harbor, Maine, and her name was *Scud.* The year was 1900.

She later came under the ownership of that old man of the sea George Granbery, who probably began wearing grooves from New Rochelle to Block Island with her. Granbery sold her to Archie Fyfe who re-named her *Whistler,* re-rigged her as a jib-headed sloop, and in 1939 sold her to the Rev. Heber C. Benjamin, of the Bayside Yacht Club. Lloyd's Register describes her as follows: Length over all, 41′ 6″; water line, 26′; beam, 10′; draft, 6′ 6″; name, *Pecusa.*

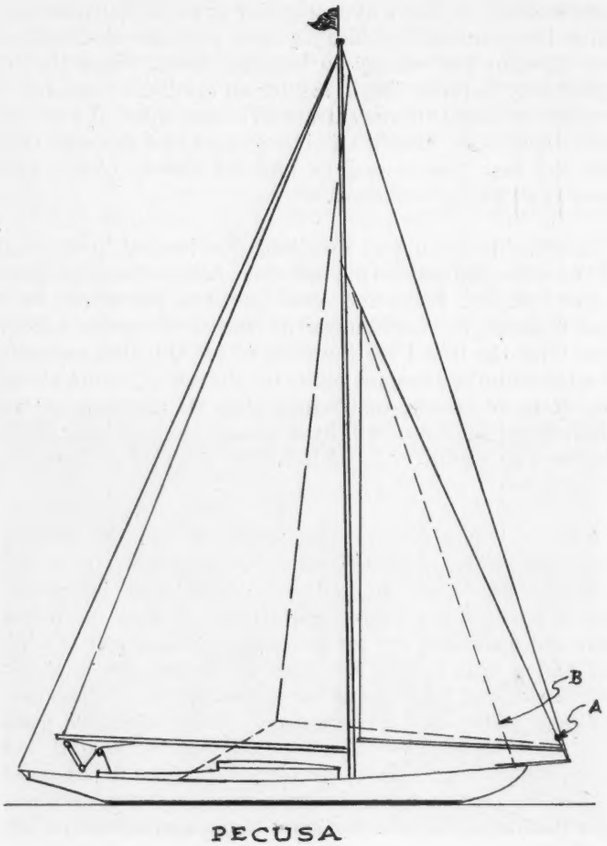
I have always been interested in the names that men give to their yachts so, whenever I hear an unusual one, I almost always try to find out what lies behind it. There was, for example, Ernest Draper's Ten-Metre *Blazing Star.* While reading over the journal of one of his forefathers, who fought with Washington, Mr. Draper came across the name of the Blazing Star Inn in New Jersey at which the patriot had stopped in his travels. It seemed to him that it made a particularly appropriate name for a yacht.

Then there is the case of "Tiny" Wheeler who cut his teeth on a marlinspike, was baptized with salt water, and married a charming girl who didn't care for sailing. In an effort to stimulate his wife's interest in his all-absorbing sport, he allowed her to name his new yacht. She, being a native of New Orleans, chose the name of one of the most famous of the Mississippi River stern-wheelers and the yacht was duly christened *Cotton Blossom.* Her dinghy is *Boll Weevil.*

Henry Devereux confided in me that the name of his yawl *Nedumo* was not the name of an Indian maiden at all but a condensation of the expression "Never a dull moment." I like it.

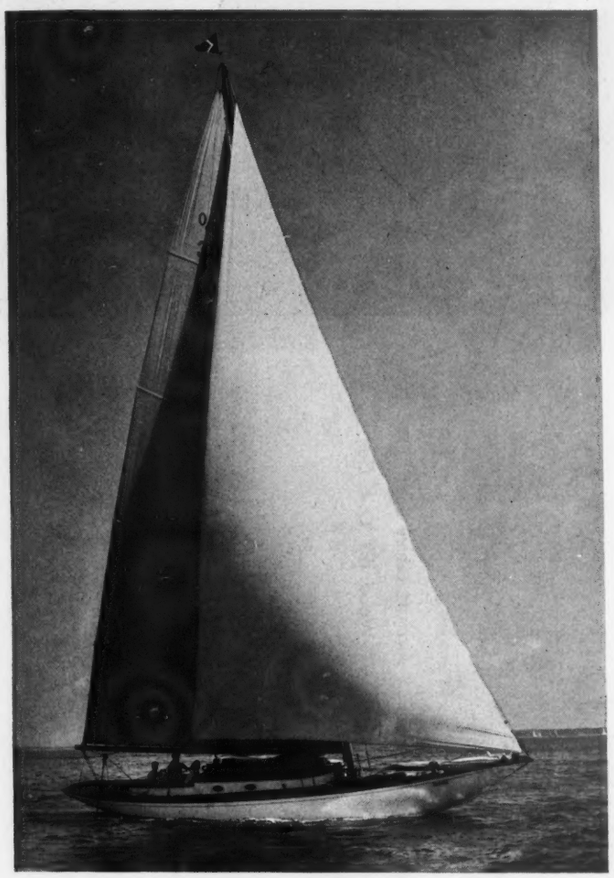
My curiosity about yachts' names naturally led me to ask Dr. Benjamin the significance of the name *Pecusa.* Blow me down! What do you think it stands for? Well I'll tell you: "The Protestant Episcopal Church of the United States of America," so help me!

The name of this yacht is no more remarkable than is her skipper. This gentleman, a clergyman of the Episcopal Church, had had no experience whatever in the art of sailing



Sail plan. A indicates location of the pelican hook and B the position assumed by the working jibstay when the big jib is being carried

until the summer of 1938. Before that year, he had been rector of a parish in the city of Pueblo, Colorado, where, being a natural sportsman, he had taken to the saddle. Trips of four or five days on horseback, up above the timber line, with pack animals, camping gear and the great open spaces had constituted his recreation. Imagine his disappointment when, arriving at his new parish in the town of Flushing, Long Island, with a trunk full of boots, chaps, ten



"Pecusa" under sail, showing the big jib that has made her famous

gallon hats, spurs and all the paraphernalia of a horseman, he discovered that riding, as practiced in the effete East, consisted in trotting around a ring at some club or galloping hell-for-leather across the great open spaces of Long Island — with occasional stops for traffic lights. No, this sort of thing just didn't appeal to his sporting instincts so he cast about to determine what seemed to be the best sport available in that area. With unerring judgment, he decided on sailing. Knowing nothing about his new pastime, he decided to start off in a small way by acquiring a little 18-foot knockabout. This boat he used for one season. At the end of the summer he came to the conclusion that he was ready to try his hand at larger game. In the course of his travels about the boat yards, his eye was attracted by the beautiful lines of the old Crowninshield sloop that was destined to be his. This was in 1939.

By the spring of 1940, the new owner of the venerable thoroughbred felt that he was ready to try his skill in competition, so he entered her in the Bayside-Block Island Race. For one's maiden race, this is quite an undertaking as the course is about 225 nautical miles and the competition is usually pretty keen. Nevertheless, our newcomer in his old yacht finished third and took a fourth on corrected time, a most creditable performance.

In the Huntington Overnight Race of that year, *Pecusa* carried away her mast, which resulted in a benevolent insurance company buying her a fine new rig, with a boom shortened by four feet and a permanent backstay. And a new jib — and what a jib! When I mentioned to my racing friends that I was off for a sail in *Pecusa*, their invariable comeback was: "Oh! yes, the boat with the jib." The new sail was of such prodigious size that, to pass it around the jibstay when tacking, it was necessary to provide some means of moving that stay out of the way. Dr. Benjamin solved this problem by the simple expedient of having a pelican hook spliced into the jibstay at a point where, when swung back, there would be 4 feet clearance between the jibstay and the topmast stay. Care was taken, of course, that when set up in the new position, there would be sufficient tension on the stay to continue to support the mast. The deck fitting used is a forged eye, the shank of which passes through the king plank and is secured below by a nut with a washer under it.

It seems to have been a most successful rig for she has done exceedingly well under it, finishing first in her division of the Handicap Class at Larchmont and Manhasset Bay Race Weeks. In the Riverside-Stratford Shoal Race, which was a reach both ways in a hard breeze, *Pecusa* averaged seven knots and finished second. In the City Island-Cornfield Race, she took second place and she won the second Hungtington Overnight Race. Quite a racing record for a novice skipper and a veteran craft!

Her 1941 performance also was excellent. She took fifth in the Riverside-Stratford Shoal Race; second in the fifth division of the Handicap Class for the season and finished first by 1 hour and 14 minutes in the Rye-New London Race of the American Yacht Club — only to lose to *Julie* by 10 seconds on corrected time.

In 1942, *Pecusa* took second in Larchmont Race Week and won first place for the season in the Fifth Division, Handicap Class. During the season, she participated in fifteen races, won nine of them, took three seconds and three thirds.

Not all of Dr. Benjamin's racing is of a serious nature, however, as the following story, which he told me as we were sailing *Pecusa* one sunny September afternoon, reveals. I give it to you in his own words:

"Every year I have the closing vestry meeting of the year aboard my boat. This year, I thought they might enjoy a race so I took twelve of them (like the apostles) as my crew in a Saturday afternoon race off Larchmont. Each man was given a job, a few of the heaviest being assigned to 'ballast shifting.' My main sheet man had considerable difficulty in finding the sheet once he let go of it, as the range of his vision was obscured by a rather large waistline. This was the cause of a good deal of amusement, as you can imagine. The Junior Warden and the Chairman of Finance Committee were jib sheet men, and every time we came about quite an argument arose between them as to who was responsible for the slack in the sheet. The Legal Counsel was acting as check on the timekeeper, who is Chairman of the Building Committee; at the time of crossing the line, they were still disputing about ten seconds' difference in their watches. The first mark really called for a jibe but, having lost the rector of All Saints (Bayside, L. I.) overboard in a similar maneuver earlier in the season, I decided to come about instead, and thereby lost more valuable time. The Vestry agreed that racing was all right for those who could stand the strain but that, after all the hard work, the beer and sandwiches on the way home was the best part of the day."

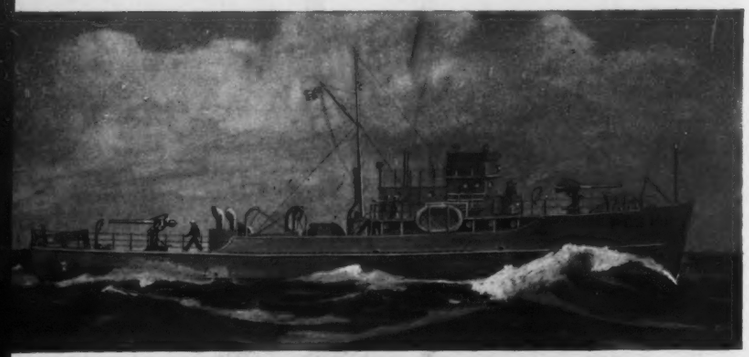
"How did you come out?" said I.

"We lost," was the rejoinder.

Hugh Kilmer, who sails with Graham Biglow in *Tiny*

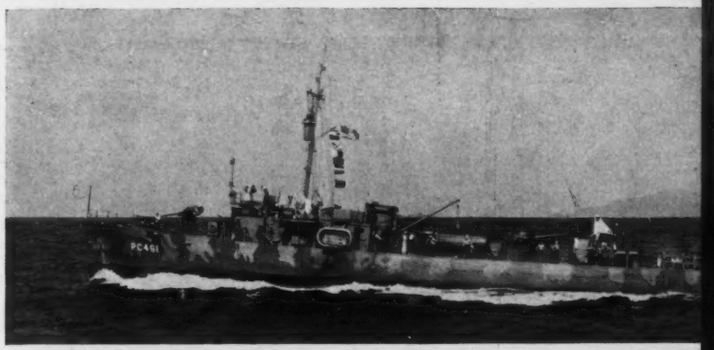
(Continued on page 100)

REPRESENTATIVE SMALL WARCRAFT



Navy, Army, Coast Guard

These warcraft are representative of the many of varied design and construction which are being built by yards throughout the United States. Design, materials, propulsion plants, fittings and armament are products of American skill and ingenuity. These boats have successfully carried the battle to the enemy, and they are impressive evidence of the marine industry's whole-hearted contribution to the nation's war effort.



NAVY

PCS Submarine Chaser

136′ O.A. Diesel. Numerous dual-purpose and A.A. guns. Depth charge throwers.

NAVY

PC Sub-chaser

Steel. 173′ O.A. Diesel. Numerous dual-purpose and A.A. guns. Depth charge throwers.

NAVY

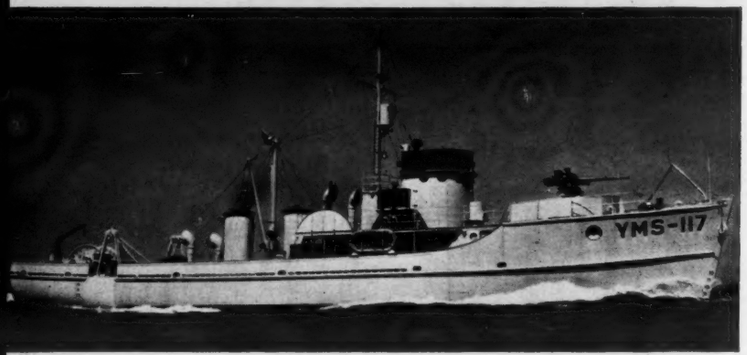
PT Motor Torpedo Boat

(Latest Elco type.) Wood. Gas. Numerous A.A.'s, four or two torpedo tubes, depth charges.

NAVY

Aircraft Rescue Boat

Wood. 45′ O.A. Gas.



NAVY

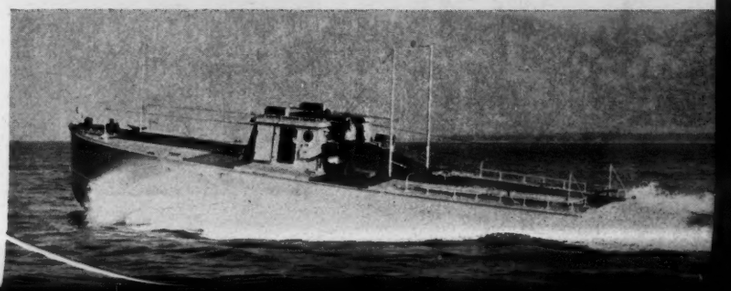
YMS Motor Mine Sweeper

Wood. 136′ O.A. Diesel. Numerous guns.

NAVY

Aircraft Rescue Boat

Wood. 63′ O.A. Gas.



NAVY

YT Tug

Steel. 65′ O.A. Diesel.

NAVY

Bomb Target Boat

Wood (armored deck and deckhouse). 60′ O.A. Gas.

NAVY

AMc Coastal Mine Sweeper

Wood. 96′ O.A. Diesel. Fitted with A.A. guns.

NAVY

SC Sub-chaser

Wood. 110′ O.A. Diesel. Numerous dual-purpose and A.A. guns. Depth charge throwers.

NAVY

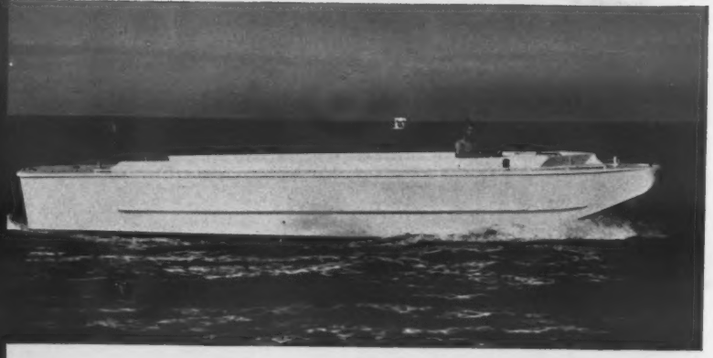
Picket Boat

Wood. 36′ O.A. Gas. Machine guns.

NAVY

Buoy Boat

Wood. 38′ O.A. Gas.



NAVY

Personnel Landing Boat

(Higgins type). Wood. 36′ O.A. Gas—Diesel.

NAVY

Ramp Landing Boat

(Higgins type). Steel. Diesel.

NAVY

Ramp Landing Boat

(Higgins type). Steel. 36′ O.A. Diesel.

NAVY

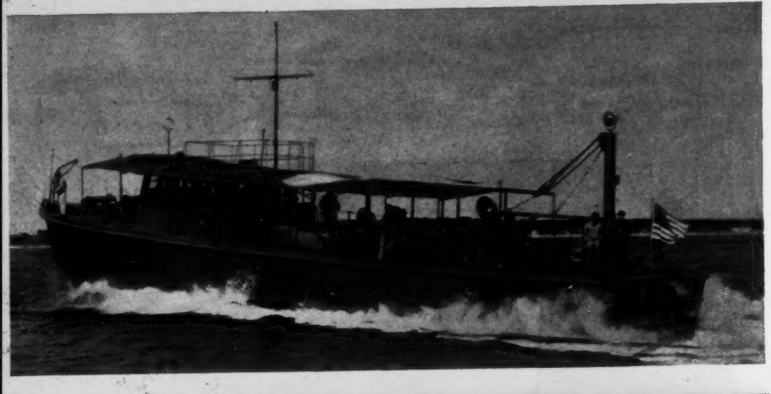
Plane Rearming Boat

Wood. 33′ O.A. Gas.

NAVY
Troop Landing Boat
Wood. 36′ O.A. Gas—
Diesel.

ARMY
Distribution Box Boat
Steel. 64′ O.A. Diesel.

ARMY
Aircraft Rescue Boat
Wood. 83′ O.A. Gas.



ARMY
Aircraft Rescue Boat
Wood. 104′ O.A. Gas.

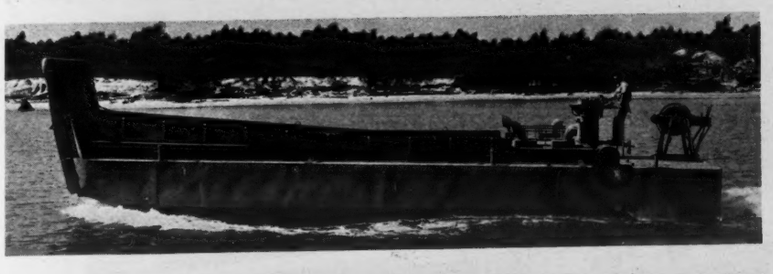
ARMY
Aircraft Rescue Boat
Wood. 42′ O.A. Gas.

ARMY
Mine Yawl
Wood. 26′ O.A. Diesel—Gas.

ARMY
Amphibian Command Boat
Wood. 42′ O.A. Gas.

ARMY
Q (Quartermaster Corps)
Boat
60′ O.A. Wood. Diesel.

ARMY
Tank Lighter
(Higgins type). 50′ O.A.
Steel. Diesel.

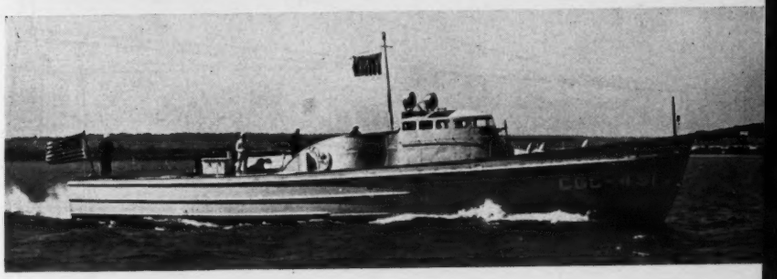


ARMY
Pontoon Boat
Steel. Fitted for outboard
motor.

COAST GUARD
Picket Boat
Wood. 38′ O.A. Gas.

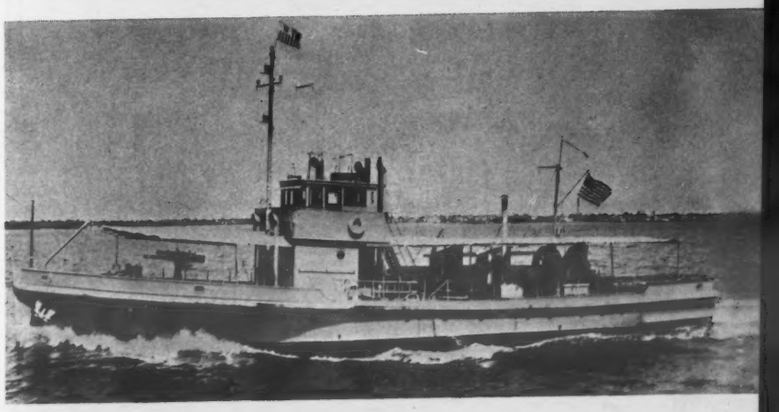
ARMY
Assault Boats
Plywood.

COAST GUARD
Patrol Boat
Wood. 83′ O.A. Gas.
Numerous guns.



ARMY
Storm Boat
Wood. Fitted for outboard motor.

COAST GUARD
Patrol Boat
Wood. 100′ O.A. Gas.
Numerous guns.



COAST GUARD
Patrol Boat
Steel. 165′ O.A. Diesel.
Numerous dual-purpose and A.A. guns.

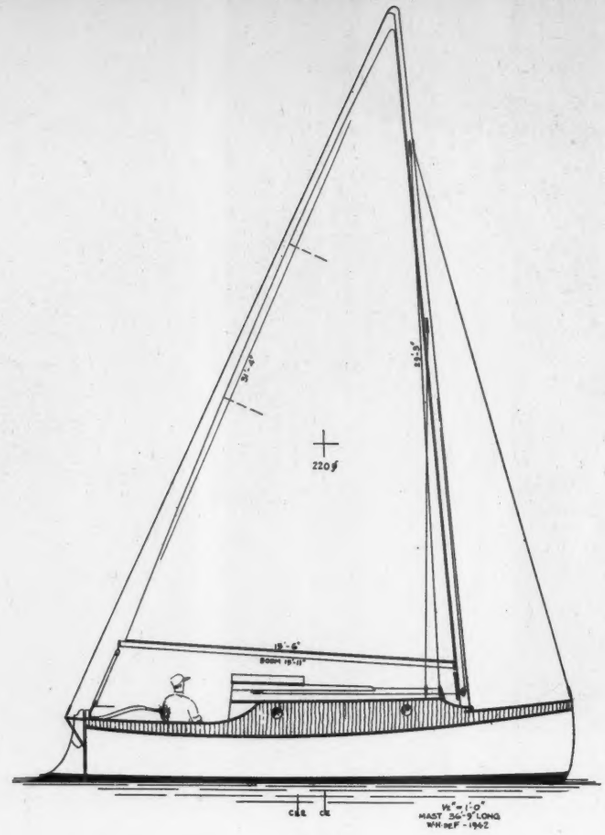
COAST GUARD
Surf Boat
Wood. Gas.

COAST GUARD
Patrol Boat
Wood. 80′ O.A. Gas.
Numerous guns.

POST-WAR PACKET

A Vest Pocket Cruising Boat Suitable for Construction by the Amateur Builder

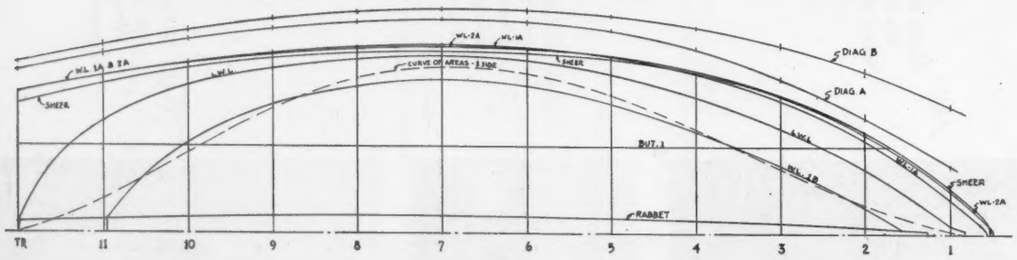
By HAM de FONTAINE

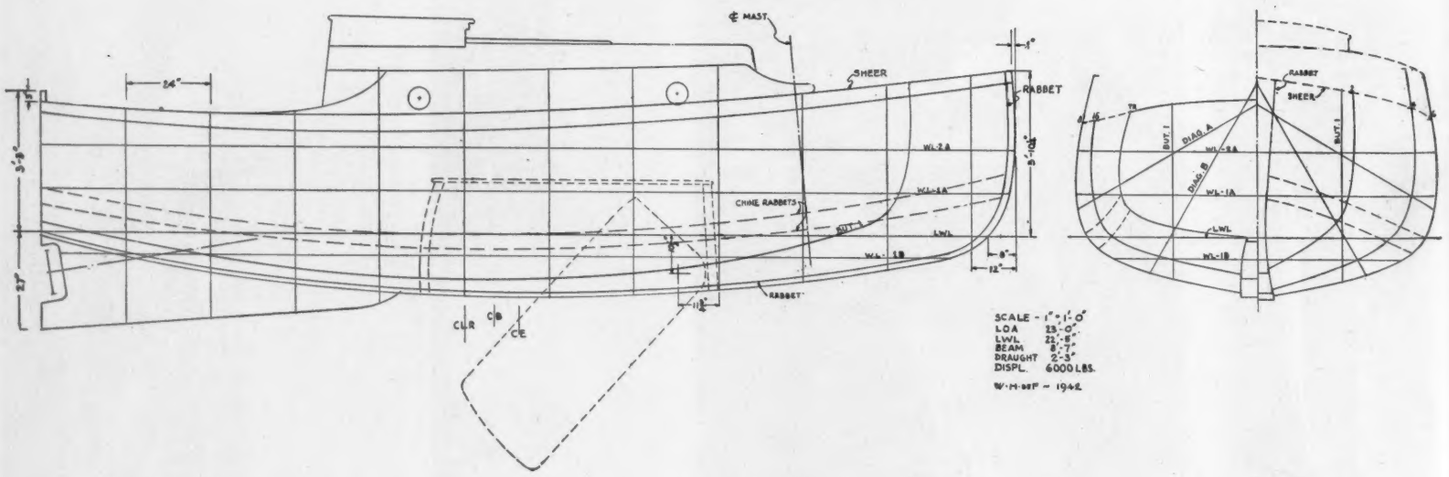


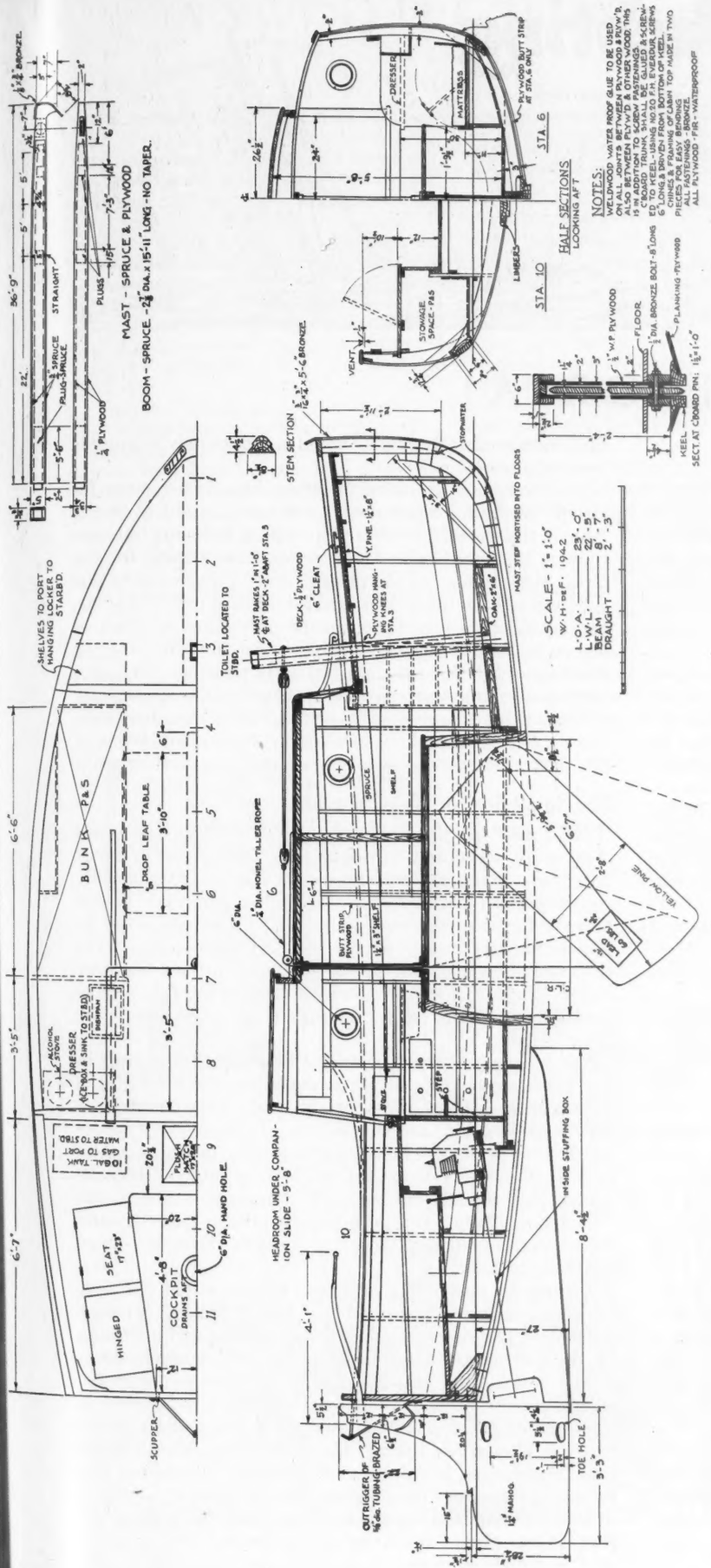
WHEN THE firm of Schickelgruber, Hirohito & Mussolini has at last been liquidated there will be a lot of Americans who want to go cruising. Many will be old hands at the sport who have had to forego it for the duration; many will be young fellows who were exposed to the lure of the sea for the first time in their country's service. Now, to pay for this shindig is going to cost a lot of money so that most of us are going to have to pull in our belts and economize for a long, long time. It is with these two conditions in mind that I have designed the little boat whose lines you see here.

The genesis of this design goes back to the year 1930 when I bought from "Slim" Baker, on a damp and foggy morning in Plum Gut Harbor, one of the early models of the now justly famous Dyer Class "A" dinks. That dink traced her ancestry directly to Holland, where boats have for centuries constituted an important part of the daily life of the people and where, as a consequence, they have been developed to an unusual degree. You see, her designer, "Bill" Dyer, owned a real Dutch hoogarts and cruised in her for years, thus coming to know the fine qualities of the type. It was quite natural, therefore, that when he came to design a sailing dinghy he should be influenced by this experience. The early "A" dink was the result and I can vouch for the fact that she was a fine little sea boat and reasonably fast under sail. She towed well, rowed easily and had great carrying capacity; we loved her well. It was natural, therefore, that when my thoughts turned to a small cruiser, the memories of this little boat should spring to mind.

This design, I should point out, is not an effort to copy the original boat but is an attempt to adapt what I consider her







particular virtues to plywood construction and the abilities of the amateur builder.

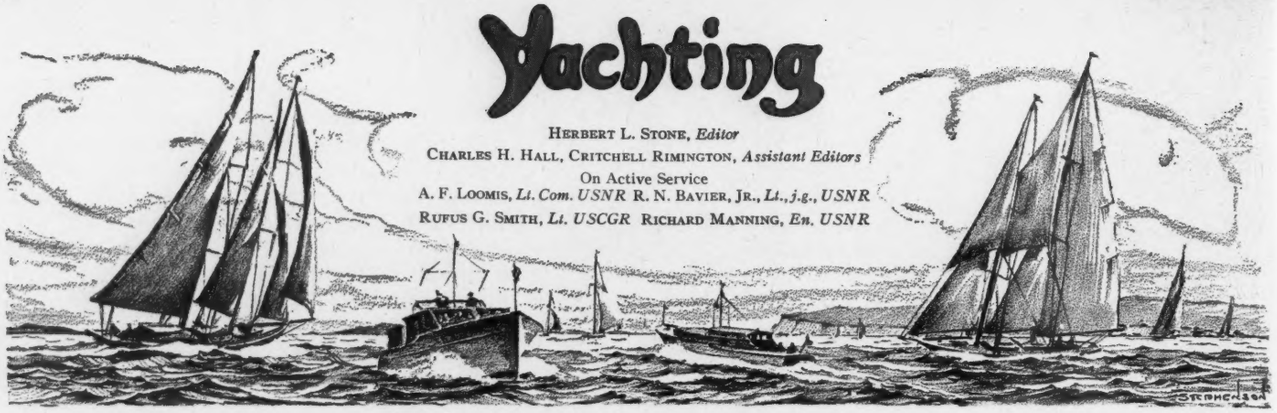
In turning out a small cruising boat, one of the most difficult conditions to meet successfully is that of providing sufficient room, both above and below decks, so that a full sized adult will be able to move about with some degree of comfort. This requires a good deal of beam in relation to length over all and seems to me to call for a shoal draft hull. In this design, full sitting headroom is provided by carrying the cabin top out to the rail, and there is 5′ 8″ headroom under the companion slide, so that the average person can stand in comfort in the galley. The companionway is made unusually wide so that a tall person will not be in danger of cracking his head while working in the galley with the slide all the way forward.

The bunks and the seats in the cockpit are 6′ 6″ long and of adequate width to provide comfortable sleeping space. The cockpit will, of course, have a good canvas shelter to convert it into a snug cabin when desired. One of the best covers of this kind that I have ever seen on a small boat is the one that Gilbert Dunham designed for his Stout Fellas. It is made in the form of a tent and extends from well forward of the companionway, where it is secured to a low athwartships rail with "Dot Fastners," over the boom and well aft, forming a veritable cabin from an open cockpit. Its sides are secured to screw eyes at the rail by short pennants which are eye spliced to grommets at the edge of the canvas at about 24″ intervals, led through the screw eyes and back on themselves to pass through a small galvanized iron ring sewed about 6″ in from the edge and in line with each pennant. With this arrangement, it is easy to get the desired tension to prevent the canvas from sagging. The pennant is simply passed through the ring and secured by a simple half hitch with a bight or loop for easy release. In the center of the after edge of the cover, a long pennant is spliced through a grommet to act as an outhaul. Where the forward end of the cover passes around the boom, a canvas wrapping similar to that on a sail cover at the mast keeps out the rain.

In the cabin, the dresser to port and the ice-box-chart table to starboard are unusually large for a boat of this size. There is lots of stowage space provided under the cockpit seats, in the drawers under the dresser, under the bunks, on the shelves and in the hanging locker to port and starboard and in the large forepeak. Two people should be able to go for an extended cruise in such a boat with considerable comfort.

The cat rig was chosen for several reasons. First, simplicity as, with a permanent backstay and no jib sheets to handle, coming about consists simply in putting the tiller over. Also, the mast is well forward, out of the cabin. It is my idea that when running before the wind, in light airs, a spinnaker will be carried. It would also be feasible to rig a temporary bowsprit and carry a jib, under favorable conditions. The boom will be fitted with a roller reefing gear such as is used on Stars; this will simplify reefing and permit the boat to be kept in proper balance whatever the wind conditions.

(Continued on page 114)


Yachting
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EDITORIAL

What's Ahead for the Yachtsman

WITH a year of war behind us, imposing as it did certain restrictions of movement and a shortage of fuel that affected owners of power driven craft, we can look back and say truthfully that it wasn't too hard, after all. Those who had the time for some recreation could, in most localities, get it afloat and, except for power boat racing in the East where fuel rationing put almost a complete stop to it, the organized sport was carried on as usual.

But now another year faces us. We've had to tighten our belts for an all out offensive and every boat owner who is not in the armed services is wondering what he can do with his yacht next season. To get an answer to the questions all such yachtsmen are asking, we queried Captain Ellis Reed-Hill, Public Relations Officer of the Coast Guard, the organization which controls the use of inland waters of the United States. His reply is reassuring. In general, while requirements for pleasure boating will be more comprehensive than last year, they will not be such that an undue hardship is placed on the boat owner. The responsible officers of the Coast Guard want it understood that they are not imposing stringent rules and regulations unnecessarily, and that their only concern is to carry out the responsibility placed upon them by the Secretary of the Navy.

Under proposed regulations, blanket authority for the movement of yachts will be superseded by special movement licenses (Form 2686). Already many of these licenses have been issued to yacht owners. These define the areas in which the vessel may operate and note any special conditions that must be complied with. Those yachts cruising on the Great Lakes will need a departure license when crossing the International Boundary, but this should be no more trouble to procure than the present visitor's cruising license now required by the Canadian Government. The sunset regulation will obtain, as last year, and all yacht movements after dark will be restricted, except in certain areas.

Identification cards for regular crew members will be required as last year, and this may be applied to guests who cruise frequently with an owner. In other words, the regulations will be sane, will allow the boat owner as much freedom of movement as is possible with regard to the demands of war.

In one other respect, the situation regarding the movement of power yachts is not so favorable. This, of course, is in regards to fuel. Elsewhere in this issue we publish the latest gasoline rationing ruling as applied to non-highway use. For occupational use of power boats, there will be enough fuel allowed for normal operation. The government is urging that all power boats be placed in commission ready for immediate operation in any service that may be required in the war effort. It points out that, with 44,000 miles of coastline, there are hardly enough boats in the country to provide adequate coastal patrols.

However, fuel rationing for these boats when used for strictly pleasure purposes will be stringent, and will be felt more in those sections where there was no rationing last year than on the East Coast, where owners have already felt the pinch of rationing. At the present time, a maximum of 500 gallons for the entire year is seen for inboard powered boats, and 80 gallons a year for outboards. This does not look so bad on its face, but the limitations imposed by dividing the purchase of this fuel into four quarterly periods is where the pinch comes. Inasmuch as most pleasure boats are used only during a three or four months' period, this works a hardship, and the O.P.A. should try to work out some modification of this that will give boat owners reasonable use of their craft.

The Small Boat in Naval Warfare

THE PART the small boat plays in modern warfare is not generally recognized by the public. The routine of escort duty, mine sweeping, coastal patrol, and such duties, usually goes unnoticed and unappreciated by the layman. It is only when the little motor torpedo boats (PT's in our Navy) do the spectacular in the defense of the Philippines, or take their toll of enemy shipping off the North African Coast or in the English Channel, where the British M.T.B.'s have accounted for many enemy sinkings, that the general public takes notice.

Yet a balanced Navy calls for a large number of craft in the various categories of the so-called auxiliary fleet. It is such vessels as these that the yacht yards of the country are best fitted to build, and that are largely manned by volunteer reserve personnel, many of whom were formerly yachtsmen. It is for this reason that those whose interest lies with yachts and the sea are eager for information about this "small boat Navy." It is in ships such as these that they and their friends are likely to serve, or that the yards they know are likely to build.

During the past year, YACHTING has presented the most complete picture of this small boat Navy that has yet been published. The size and scope of the building and operating program revealed has been almost beyond comprehension.

Just how big the job has been, what it has meant in the way of expansion, and what it has called for in the way of ship-minded and sea-minded manpower, is reflected in this issue of YACHTING. Taking the place of an Annual Show Issue devoted to the peaceful recreation of yachting, this January issue shows the progress that the industry devoted to boatbuilding and equipment has made in helping the Navy, Coast Guard and Army to win the war. We think the story is equal in interest to any that has been told in past Show Numbers.

AS TOUGH AS THEY COME

CHIEF Komb is the biggest man in the base. He weighs about two hundred and fifty and there is no . . . but first let me tell you, a Chief out at our base is usually a skipper; anyhow, this one is, and the skipper is the boss of the men in his ship.

Well, Komb is an awfully big man, as I said, but gentle, too. He almost always has a smile for everyone and would give you the shirt off his back, as I could show you only I just sent it to the laundry. He doesn't have to be tough because no one in his right mind would cross him, sober or . . . no that's the story.

Anyway, this Komb is Chief in a motor-sailer, the *Mandor*, and he must've been a sailing man all his life 'cause one of his hands could cover yours and mine both at the same time. Big hands and strong; he could crush a rock, I'll bet, anyhow a man, easy, and especially the cook who should have had more sense. This cook, name of John, got fried in Gitchell's the other night and didn't sober up for breakfast. In fact, he didn't even sober up for lunch.

Well, Komb is a good-natured guy, like I said, and he put up with eating shredded wheat for breakfast and grape nuts for lunch, both with evaporated milk, and he wasn't sore — that is, not yet. But, about 2:00 p.m., he finally found John asleep on the bar and roused him out. Very easy, mind that, and said: "Come on, Johnny! How about some dinner, fella?" But John only looked up with disgust and said: "The hell with it." Komb shook him a little more firmly and said it again: "Come on, fella; how about it?" But this time John was too dumb, or too soused, I guess. He looked up and just said: "The hellwithit."

Then Komb, in a big brotherly way but losing his control just a little, carried John out to his car, drove him back to the *Mandor* and sobered him up somewhat with some cold water out of a pitcher. John opened both eyes wide, looked at Komb and said: "I still say the hellwithit."

That was the beginning of the end, so to speak, 'cause Komb went right over to the office and asked if he could "take the matter into his own hands" — which they said he could.

Well, he went back and grabbed John hard, so he knew it, and said: "Look. You got one of two things you can do. You can march up and down this sea wall with a broom on your shoulder for three hours or else I'll break every bone in your body, and I hope you don't choose the broom."

After about two hours of marching, such as it was, in through the gate walks Commander Diamond. He's a big brass hat who trouble shoots all over the country and is a tough guy if you're offside.

Diamond sees this jerk with the broom doing the drill up and down the sea wall and stops dead in his tracks. "For the . . ." He starts in and then stops and finds out from a nearby sailor what ship the broom carrier is from, walks fast over to the *Mandor* and hollers for the Chief, who pokes his head out the companionway and comes to attention.

"Yes, Sir."

"What's the idea this man fooling around with a broom?"

"Discipline, Sir; for mutiny, Sir."

"How long do you propose to waste his time with that blasted broom?"

"Three hours, Sir."

A little pause and the Commander says: "That's not long enough, make it all night."

Well, about 10:00 p.m., John gives up and goes over to the office and tells the commanding officer: "the hellwithit."

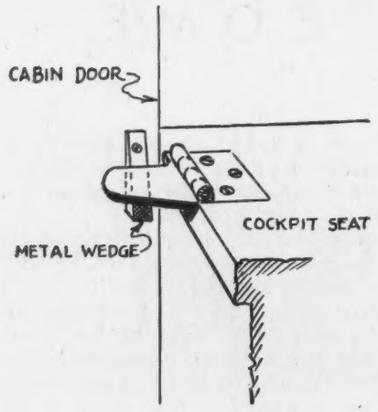
Anyway, you gotta admit he was consistent.

Well, they threw him into the brig and he's still in it.

JIMMY LEGS

CAUTIOUS CONRAD

"GADGETS & GILHICKIES"



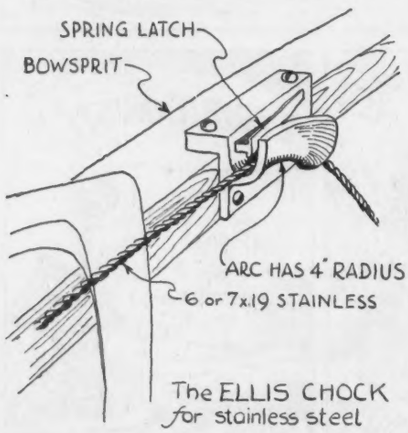
RATTLEPROOF HOLDBACK

A Rattleproof Holdback

▶ One reason that sail boat men are proverbially reluctant to use their motors, even when becalmed, is unquestionably because the resultant vibration and rattle are repugnant to them. Countless devices have been invented to overcome this annoyance and the accompanying sketch shows one that Bill Lundgren developed to silence the open doors of the cabin of his sloop *Butterfly*. The gadget is simplicity itself, consisting of a heavy brass hinge, filed to the shape shown, and a metal wedge. The hinge is let in flush with the top of the cockpit seat and is so located that, when open, it will engage the angular face of the wedge. The latter is screwed to the inside face of the door in such a position that when the door is opened as far as it will go, the wedge lines up with the hinge, as shown, and any tendency on the part of the door to rattle results only in the hinge and the wedge becoming tighter. When the door is to be closed, however, simply giving the hinge a flip over releases it instantly.

The Ellis Chock

▶ The yawl *Osiris*, Ridsdale Ellis, master, has been fitted with a fine chock, designed especially to accommodate 6 by 19 or 7 by 19 stainless steel cable. Unless you are already the happy possessor of such a piece of wire,



The ELLIS CHOCK for stainless steel

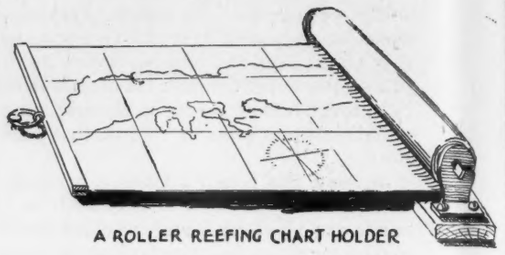
your interest in its use must be academic for the duration, as to buy any now is just about as easy as getting your Uncle Sam to give you a few pounds of that stuff he has buried at Fort Knox. To conserve what you have, however, is of the utmost importance. Mr. Ellis, who designed the fitting in question says: "Steel cable cannot be bent repeatedly to a small radius of curvature without breaking the wires composing it. Manufacturers of wire rope are careful to specify the minimum diameter of sheave with which it should be used. For a 6 by 19 or 7 by 19 cable, the sheave should have a diameter about 24 times that of the cable. Thus for a $\frac{5}{16}$" cable, the sheave should have a diameter of 7 $\frac{1}{4}$". A sheave of that diameter placed on the side of the bowsprit would look clumsy. A quadrant with a radius of 4" is much smaller, looks neater and may be used instead of a sheave since it does not have to rotate. Further, a quadrant may be shaped like a horn to allow the cable to swing from side to side and still present, over a wide angle of swing of the vessel, a supporting surface of the desired curvature.

"A spring latch serves to keep the cable from jumping out of the chock."

A Roller Reefing Chart Holder

▶ In small cruising boats and in racing boats, too, the proper care of charts is always difficult. Usually, they are either rolled and tucked behind something, where they are in constant danger of being sat on or otherwise crushed, or they are folded and likely to be walked on — to their everlasting harm. Now a chart is a willing and most useful tool and helper to the sailor, and deserves the best of care. There are times when having the proper chart at hand may mean the difference between safety and disaster. The accompanying sketch shows a means that I worked out and found most satisfactory in a little boat that I once owned. It consists principally of a shade roller, shortened to suit and with the ratchets removed, mounted in the usual brackets and fastened to a suitable wooden base. The base may be secured permanently to one end of the surface that is used for a chart table, or may be clamped temporarily in position when wanted; then, if the chart is to be used in the cockpit, the whole unit may be taken along.

In preparing charts for this purpose, it is necessary to cut them to long, narrow shapes, eliminating parts that are not used but being careful to retain as many compass roses as possible. Where several charts are to be mounted in this manner, it will, of course, be necessary to make them all about the same width; in any case, the rollers will all have to be identical in length to fit between the mountings. One end of the chart is tacked and glued to the roller, using the same tacks taken from the shade, and taking care that the roller will be revolved in the same direction as formerly. The other end is also tacked and glued between two pieces of hard wood, each piece being about $\frac{1}{8}$" by $\frac{3}{4}$" and the proper length, as shown. In the center of this piece, after the glue has set, a screw eye and ring (such as used on window shades) is screwed. As the ratchet has been removed from the



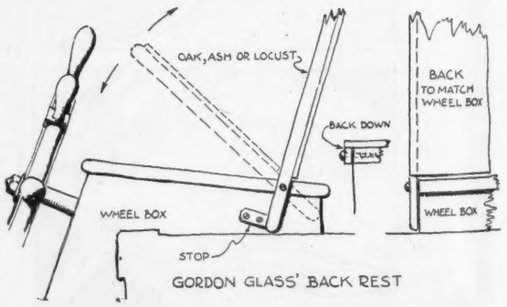
A ROLLER REEFING CHART HOLDER

roller, it is necessary to provide some means of holding the chart out where it is wanted; this ring, hooked over a copper nail head, is as good as any.

When not in use, charts mounted in this manner may be safely stored in racks made to fit the rollers and hung overhead, out of the way; being sure, of course, to mark the title of the chart on the outside. A rubber band or a piece of marlin will keep charts from unrolling when in storage. Several coats of wall paper sizing, such as made by the Pittsburgh Plate Glass Co. and described on this page in March, 1942; or treatment with Tocol "30," sold by Protective Coatings, Inc., of Detroit, and described in Waterfront News (October, 1942, YACHTING) is recommended to keep your charts in usable shape for as long as possible.

Back Rest for Wheel Box

▶ Gordon Glass, a young yachtsman from the West Coast, who leads off by admitting that he is lazy, has sent in an idea for an excellent back rest for a wheel box. The side, or supporting, members should be of a good strong wood such as ash, oak, locust or hickory. The back should be of the same material



GORDON GLASS' BACK REST

as the wheel box itself and painted or varnished to match it. Construction of this rest is quite simple and should be apparent from the sketches. Fastenings, of course, will be brass or other non-rusting material. The use of Weldwood waterproof glue as well as the usual fastenings would strengthen it a lot so that the back could be made of lighter weight lumber.

HAM DE FONTAINE

"Idaho's Mountain Navy," Flotilla 83, under way on Lake Pend Oreille, Idaho

WITH THE U. S. COAST GUARD AUXILIARY

▶ Twelve months ago, the Coast Guard Auxiliary, nationally speaking, could best be described as an enthusiastic but somewhat disorganized organization with a great desire to serve but with little or no idea as to what to do or how to do it. The story of the growth of this nation-wide corps of volunteer auxiliarymen in the months which have followed Pearl Harbor, of the present excellence of its well-knit organization — both national and local — and of its substantial contribution to national security is now beginning to come to light. It is a record of which every C.G.A. member may be justly proud.

Yachtsmen and all others who have had the pleasure and privilege of knowing Captain Ellis Reed-Hill, able Director of Public Relations of the Coast Guard, will be delighted to know that Captain Reed-Hill has been appointed Chief Director of the Auxiliary. Captain Reed-Hill will retain his important post of Director of Public Relations of the Coast Guard, and this dual activity is made possible by the fact that his right hand and aide will be Lieutenant James H. Kimberly, who has done such an outstanding job as Acting Director. With these two men at the helm, there can be no question what the future course of the C.G.A. will be.

▶ So extensive is the "operations report" of the C.G.A. in the first year of war that it is impossible to cover more than certain sectional reports at this time. These which follow are printed here not because they are necessarily more impressive than those reported from other districts, but because they are the first to be received. They are, however, typical of the performance records which will be published in future issues of YACHTING.

▶ The Coast Guard Auxiliary in the Chicago District now is composed of 1565 members owning 1100 vessels ranging in size from 16′ sail boats up to 165′ steam yachts. Most of the vessels over 50′ in length, however, are now in the service of the regular Coast Guard on anti-submarine patrol and on patrol under the various Captain of the Port details all over Lake Michigan. The Chicago District organization is composed of 48 flotillas in seven Divisions, covering every important port on Lake Michigan. These 48 flotillas are all doing an important wartime job and have turned in thousands of man hours of patrol work and watch standing under the direct jurisdiction of officers and petty officers of the Coast Guard. One flotilla alone has accounted for 7680 man hours of active official Coast Guard service and, in addition, has turned in a score of assistance reports and has patrolled yacht races in their vicinity.

Since January, 1942, the Auxiliary has almost doubled its ranks in the Chicago District, having jumped from a membership of 681 men to the present total. This indicates a real trend in the interest that yachtsmen and other boat owners are displaying in winning the war. Some individual flotillas tripled and quadrupled their membership. The total figure represents about three-fourths of all yacht owners on Lake Michigan.

Early in 1942, when the fingerprint law became effective, the Auxiliary arranged for and executed the fingerprinting of all its own members, plus several hundred other yachtsmen and professional sailors operating in and out of their home ports.

During the navigation season and until October 1st, 1942, 130 reports of assistance were made by members of the Auxiliary. Of these, about half were assistances rendered to vessels in distress and these vessels were worth an aggregate of $100,000.00. Possible loss of life was averted in these assistances by taking off the distressed vessels some 200 persons. Yacht regattas and races were patrolled throughout the summer, this being one of the duties formerly attended to by the regular Coast Guard.

In several harbors in and around Chicago, where upwards of 1000 yachts are moored annually, Auxiliarists made a complete survey of all yachtsmen and their vessels for proper numbering in accordance with boat numbering laws, use tax stamps, and personal Captain of the Port identification cards. These surveys were turned in to the District Captain of the Port.

Although complete records are not available, approximately 700 members of the Auxiliary in the Chicago District stood more than 200,000 man hours of watch duty and patrol duty all over Lake Michigan. A constant patrol of both branches of the Chicago River has been maintained since June, using Auxiliary vessels manned by Auxiliarists and one Coast Guard petty officer. Another patrol has been maintained nightly in the Calumet River by Chicago and Indiana Auxiliarists and a close watch is kept on loading platforms and docks of the steel mill district. In shipyards at St. Joseph, Mich., Manitowoc, Wis., Sturgeon Bay, Wis., and others on Lake Michigan; at the great loading docks in the ore country and in the steel mill districts, Auxiliary patrols have taken a big part in guarding against sabotage.

Since May, 1941 over 50 vessels of the Auxiliary have been turned over to the Coast Guard for the duration of the war, and some have been presented as outright gifts. In several instances, the owners of these vessels also joined the Coast Guard and are now stationed wherever they happen to be most useful, either on board their own vessels or far away from them. The Auxiliary contributed more than 100 men to the ranks of the Coast Guard Reserve since its inception, and these men all became officers or petty officers.

During the summer of 1942, seven cruises were made by 400 Auxiliary members using 90 boats. One cruise consisted of 26 vessels and 125 men, and the course was from Chicago to St. Joseph, Mich., to Michigan City, Ind., and back to Chicago. During 1941 and 1942, about 210 members of the Auxiliary participated in examinations for advancement, and out of these 87 made the grade of Navigator, eight were awarded certificates as Engineers, and three as Senior Navigators.

Many courses from the Coast Guard Institute at New London were taken by the

members, and eleven were qualified as Navigators by the Institute. All Auxiliary members are required to be proficient in boat handling and in semaphore signaling, and it is estimated that every member of the Auxiliary after two months of membership can qualify as signalman and boatswain.

▶ The Auxiliary in the First Naval District on December 1st, 1941, had only 300 members and 275 vessels distributed over ten flotillas and grouped into seven divisions. The first problem was to expand the group, to get more of the right type of men and vessels into the organization. The basic policy was not to lower any of the standards but rather to require a stricter enforcement of all provisions of the man's competence and the vessel's fitness. Under this policy, the Auxiliary in the First Naval District has now grown to 3026 men, 1835 vessels, and 61 flotillas.

On December 7th, 1941, came the first real call, or rather opportunity, for the Auxiliary to step in and help. A recruiting drive was on and additional floor space was taken over. Two floors at 70 State Street, Boston, without a shade or a chair were stormed by applicants. In two hours, the Auxiliary loaned and had installed portable chairs, desks, typewriters, tables, *and* sufficient unofficial personnel to meet all comers and assist in filling out applications, preliminary examinations, etc., and thereafter established a regular schedule of voluntary working hours until such time as the regular service personnel had been augmented sufficiently to take over.

About this time the questions of waterfront security required serious attention. Most of the Auxiliary vessels in this District were hauled out for the winter. Those that were in commission or could readily be commissioned were promptly placed at the disposal of the Coast Guard. This patrol activity has expanded to a point where this past summer the entire coastal waters as well as harbors from Portland, Maine, to Westerly, Rhode Island, were covered. There were in continuous service:

49 flotillas furnishing 273 vessels, manned by 1296 Auxiliary members.
8 flotillas and 215 members fishing and reporting.
2 flotillas and 83 men ready and standing by.
1 flotilla and 60 men maintaining constant beach patrol.

One of our projects has been the establishment of a Hobby and Special Qualification list. We find that, while love of the sea and boats is the bond that ties us together, we have in our ranks doctors, lawyers, boiler inspectors, textile engineers, artists, bankers, musicians, etc., etc. These hobbies, professions and side lines have been catalogued and cross indexed. We are still waiting to be stuck on any special problem, from radio engineering to dog teams.

The Auxiliary in the First Naval District has organized a "Ferry Command" to pick up C.G.R. boats and move them to their assigned locations. This work has been supplemented by compensating the compasses and delivering the vessels with proper deviation tables, n.p.h. vs r.p.n. tables, etc. Several flotillas have offered their services as instructors and conducted weekly classes on the subject of piloting.

When the Temporary Reserve was established, it naturally fell to the Auxiliary to set up the machinery for procuring and enrolling the men. Our number "1" class was those men qualified for Coastal Picket Duty. Thousands of these men were interviewed and some 600 men were enrolled for this type of work. In addition to coastal picket a few men were enrolled for full-time duty on special assignments and some 1100 men have been enrolled for part-time intermittent duty. The procurement of vessels for Coastal Picket was handled through the Auxiliary office and some 54 sailing vessels are today on full-time patrol duty offshore. The Port Security fleet which has been loaned to the Government by Auxiliary members totals about 300 vessels.

▶ Within a week after receiving requests for men and boats for the Sea Frontier Patrol, the Cleveland District of the C.G.A. was sending a steady stream of experienced yachtsmen to various ports along the Atlantic Coast to serve in boats already requisitioned. Crews were enrolled in the Temporary Reserve and then took the boats to the Coast. At first, these men were signed for only sixty days but later most of them enlisted for the duration.

The Temporary Reserve officers charged with enrolling the personnel were kept busy. Lieut. Commander (T) E. O. Bodkin, at Detroit, with his aides provided crews for about fifteen boats, both power and sail. Lieut. Commander (T) P. J. Hunt, at Buffalo, provided about the same number of crews. Lieut. (T) Oscar Netschke, at Cleveland, gave up his business and spent his entire time at the Coast Guard office handling personnel matters. Other officers of the Temporary Reserve who provided crews were: Lieut. (T) August Streicher, of Toledo; Lieut. (T) Earl Sectz, of Sandusky; and Lieut. (T) D. S. Sterrett, of Erie.

Membership in the Division has grown during 1942 to nearly 3500 members in 16 divisions and 60 flotillas. The official report shows 171 boats used; 555 men on duty; 3196 boat hours expended, and 11577 man hours expended.

The importance of the safety of the iron ore vessels and equipment necessitates the use of a large number of boats and personnel on constant patrol. The Detroit and St. Clair rivers present difficult and important patrol problems as well as do harbors such as Toledo, Sandusky, Lorain, Cleveland, Ashtabula, Conneaut, Erie, Buffalo, etc. All of these require patrolling by Auxiliary members serving as Temporary Reservists.

In the educational courses, attention is being given to infantry drill, signal practice — both semaphore and blinker — handling small arms and machine guns and the practical requirements in boat handling. A special educational committee has been appointed with Lieut. (T) Charles Wallach, of Cleveland, as chairman.

▶ Units in the Third Naval District are compiling a splendid record, Lieut. Comdr. P. D. Mills, U.S.C.G., director of the Auxiliary in that district, announcing that Auxiliary units had assisted nearly 200 vessels and their crews during a recent month.

"The Coast Guard Auxiliary in the Third Naval District now numbers slightly less than 6000 members, over 3000 vessels and approximately 100 flotillas, divided into eleven divisions," said Commander Mills. "An indication of the hard work these men are doing is the fact that in a single month Auxiliary units in this district patrolled a total of 100,000 miles. One division has a record of 15,000 miles patrolled and several are over the 10,000 mile mark."

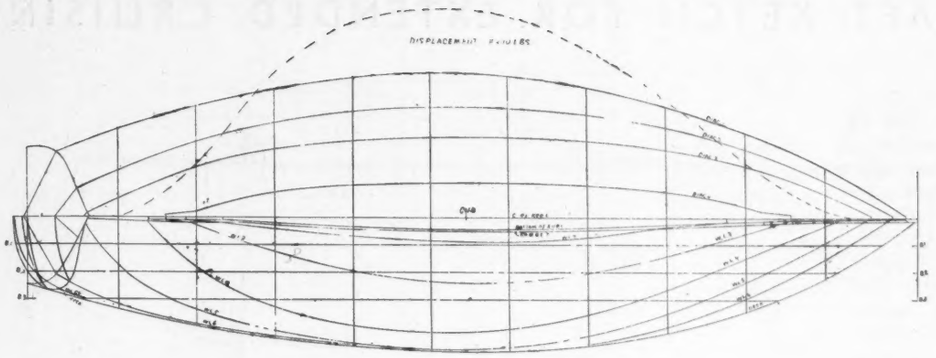
Flotilla units, in boats manned for the most part by Auxiliary members, many of whom also are members of the U. S. Power Squadrons, are engaged in important duty throughout the Third Naval District, which extends from New London, Conn., to Manasquan, on the New Jersey Coast. Active and enthusiastic flotilla units are to be found along the Connecticut shore, up the Hudson, on the northern New Jersey rivers, and the north and south shores of Long Island. They are performing invaluable aid in promoting greater efficiency in the operation of boats, better understanding of wartime regulations and, in general, assisting in many of the duties of the regular Coast Guard personnel.

The training of the Auxiliary members has been greatly aided by carefully planned visual instruction, in the shape of motion pictures, Commander Mills said. Every type of duty is shown in these films, from the rescuing of crews in distress to the operation of Lyle guns, and proper recruiting methods.

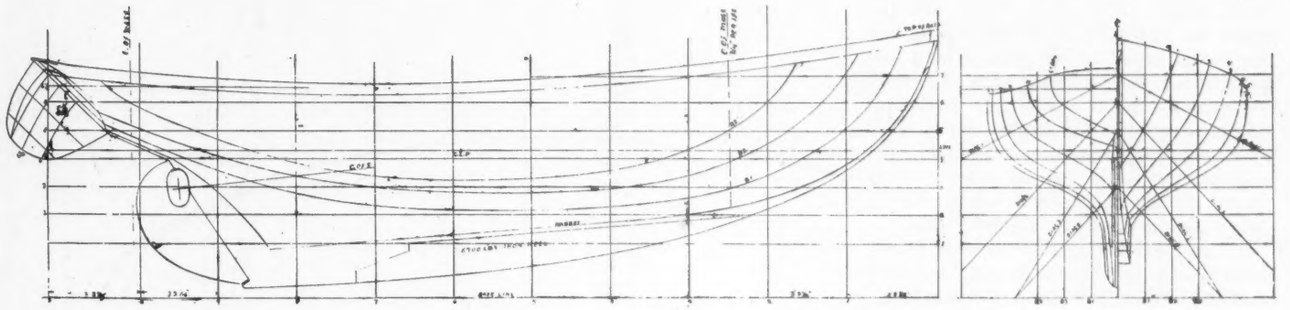
▶ During the past several months the value to the Coast Guard of the flotillas of the C.G.A. in the Fourth Naval District has increased to a great degree. The activity receiving the most emphasis in the majority of the flotillas has been instruction in piloting, navigation and seamanship. In practically every flotilla, signalling by both semaphore and blinker has received paramount attention. Recognizing the need of instruction in handling engines, one flotilla conducted a two months' course during the summer in motor mechanics, which was exceptionally well attended. A second flotilla has, within the last month, established an engine and motor mechanics' course which is being attended by members of several flotillas. This class was made possible through the facilities placed at the disposal of the flotilla by one of the vocational schools in Philadelphia.

Coast Guard Headquarters, as well as the Commander of the Eastern Sea Frontier is familiar with the conduct of the Auxiliary patrols along the shores of New Jersey. Since their inauguration early in 1942, the patrols have operated over 67,000 miles for the dual purpose of being at hand if the need for any rescue work arose and, by dint of their extensive coverage, making it extremely inadvisable for enemy submersibles to even consider the raising of a periscope. During the past seven months, some 150 Auxiliary vessels have taken part in the patrols, running nearly 9000 hours without serious accident to either personnel or boats. This constitutes a splendid indorsement of the ability and seamanship of the men and the seaworthiness of their boats.

(Continued on page 171)



Sheer, half-breadth and body plans of the new yawl. She has considerable sheer, firm sections and easy fore and aft lines

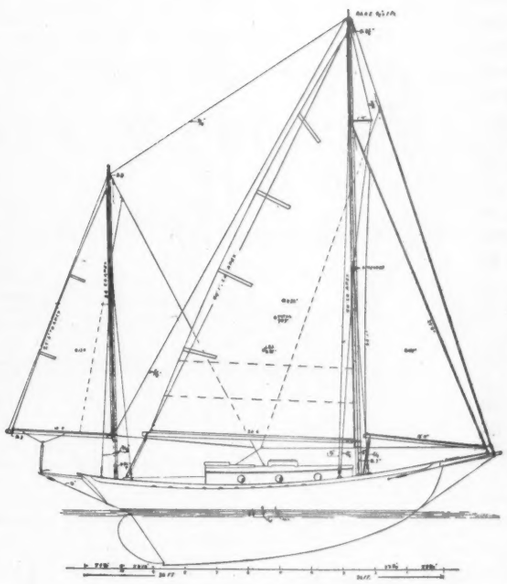


AN AUXILIARY YAWL FOR MEXICAN WATERS

ELWOOD SPRAGUE, naval architect and builder of Oceanside, Long Island, is responsible for the design shown on this page. Sometimes called "That fellow from Rockaway," he has turned out several boats which have shown their heels to competitors in long distance races on Long Island Sound. The boat here was designed for Henry V. Lonergan, of Mexico City, and she is the third design which Mr. Sprague has made for the same owner. The new yacht will probably be built in Mexico.

Her general dimensions are as follows: Length over all, 36′ 0″; length on the water line, 29′ 0″; beam, 10′ 8″; draft, 5′ 4″. Her displacement is 18,300 pounds and she carries an iron keel weighing 6200 pounds. Her total sail area is 707 square feet. Of this, there are 155 square feet in the jib, 120 in the jigger and 432 in the mainsail. A good sized mizzen staysail is provided and a genoa which overlaps considerably. She should be able to step along at a smart pace.

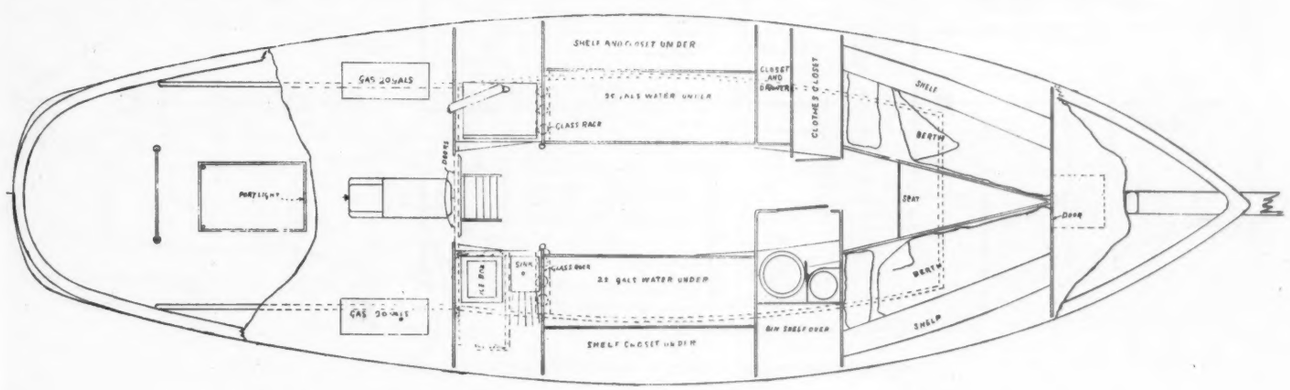
The engine, installed under the bridge deck, is a Universal "Utility Four" developing 25 horse power. It drives the propeller, located on the center line, direct. A gasoline tank of 20 gallons capacity is located outboard on each side in wake of the engine. The engine is bulkheaded off from the cabin but is quickly accessible from the cabin through doors under the companionway ladder.



Sail plan and, below, cabin plan

The model shows considerable sheer, firm sections and easy fore and aft lines. The ends are moderate and well balanced. Displacement is ample and construction stout.

The cabin trunk is long and wide and there is more than 6′ 0″ headroom the full length of the cabin and just under that figure in the forward stateroom. The fore peak has its own hatch and is also reached through a door in the forward bulkhead, assuring good ventilation in the stateroom. The galley, with coal-burning stove, ice box, sink, etc., is aft. Amidships is the toilet room, with lockers opposite.



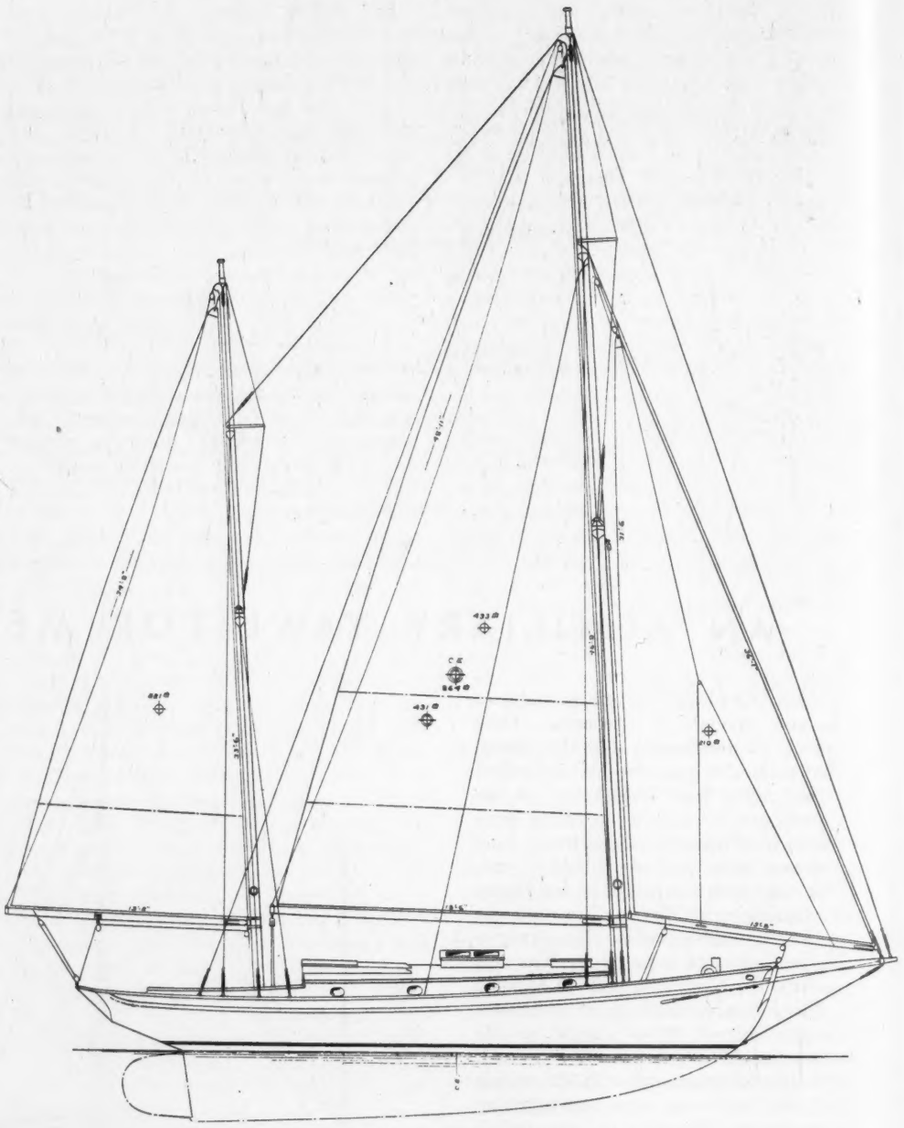
The plans reproduced in this section are the property of the designers under whose name they appear. For further information concerning any design address the naval architect in question.

A SHOAL DRAFT KETCH FOR EXTENDED CRUISING

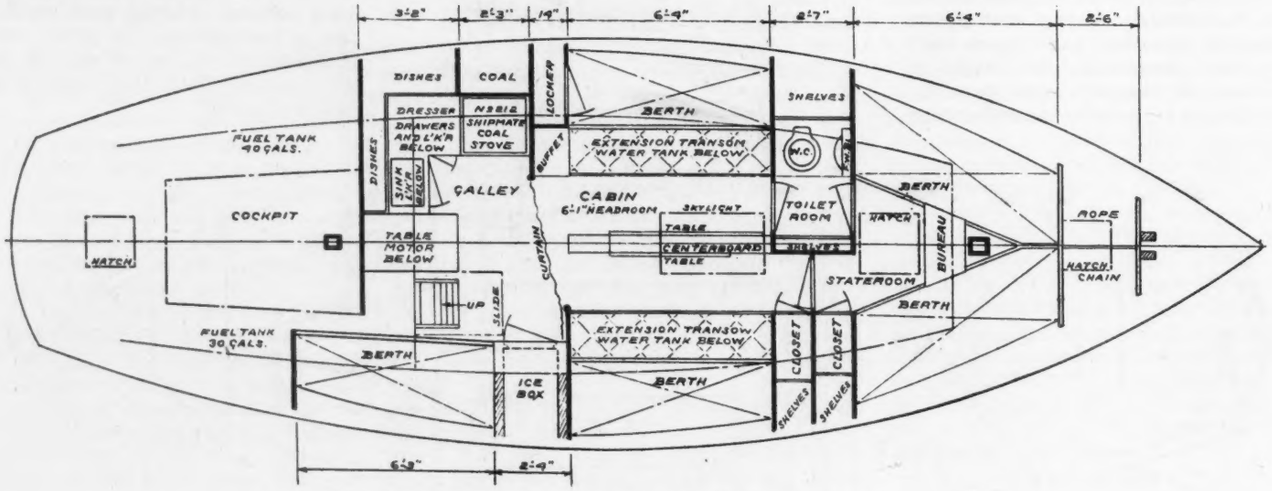
THIS KETCH was designed to meet the requirements outlined by a number of yachtsmen, who were asked to describe their ideas for a postwar cruising boat. Among the requirements were sleeping accommodations for six or seven people; shoal draft combined with seaworthiness; and plenty of power. Ralph E. Winslow has met admirably these specifications in the accompanying plans of a centerboard ketch whose general dimensions are: Length over all, 39′ 0″; water line, 30′ 2″; beam, 12′ 7″; draft, 3′ 10″ with the board up. The sail area of 864 square feet seems well suited to her purpose as a seagoing vessel; the combined areas of her jib and mizzen are 431 square feet so that in strong breezes she can shorten sail quickly by simply dropping the main and still have a fair spread of canvas. In a really hard chance, she should heave-to nicely under a close-reefed mainsail or a storm trysail.

Her accommodation plan shows a roomy galley aft, a toilet room opening into both the main and forward cabins and adequate hanging locker space. There are standing berths for five and extension transoms in the main cabin for two extra persons. The water tanks, which hold a total of 150 gallons, are located amidships, a desirable feature which allows the boat to maintain her fore and aft trim whether the tanks are full or empty. A commodious ice box is provided to take care of her large crew. Between the main cabin and the galley, the plans call for a curtain so that the watch below can have a little privacy. Over the motor is a table which will be useful for both galley work and as a chart table. The companionway is off center, a feature which sailors with thin skulls will appreciate. Another good feature is the arrangement of her fuel tanks; two are provided with a total capacity of 70 gallons, which should allow fairly long runs under power, if necessary.

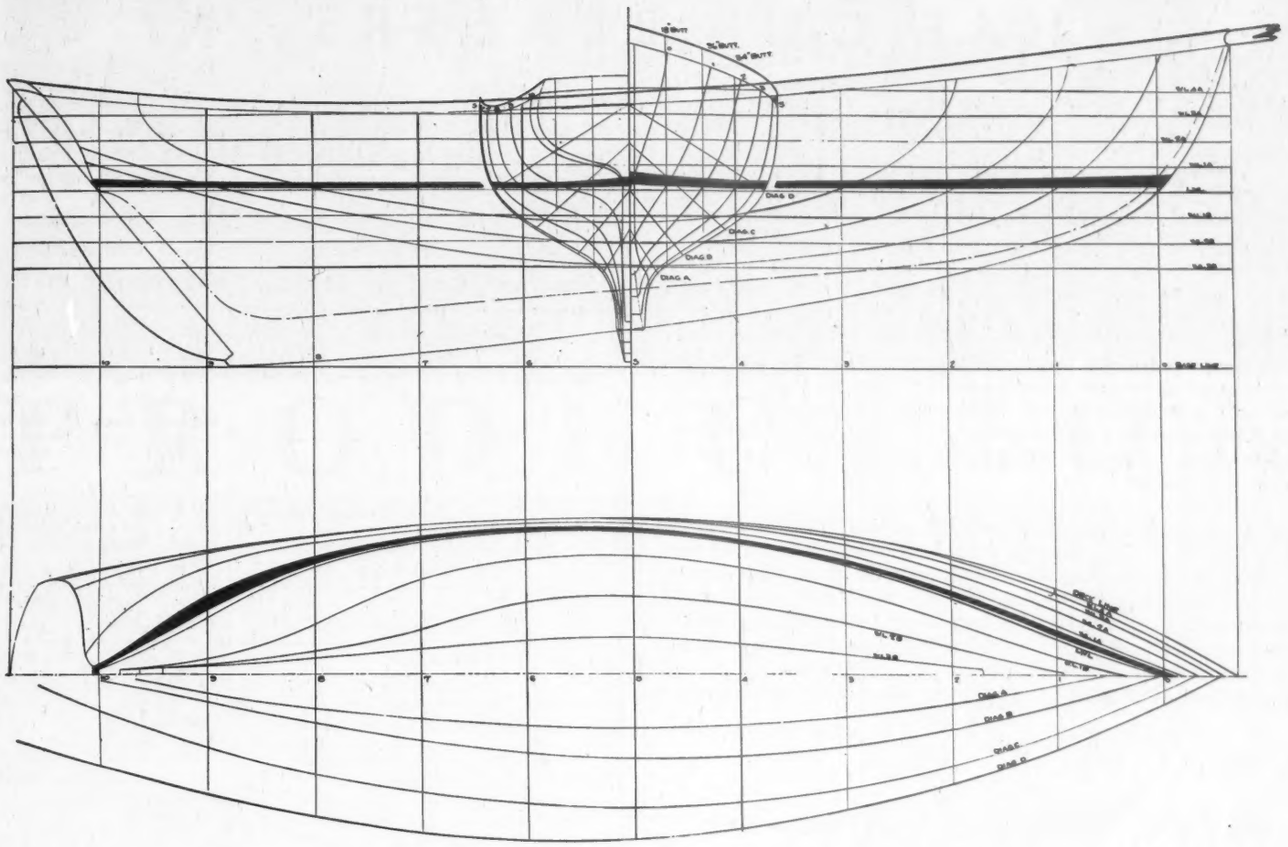
The designer feels that a 40 hp. motor with a reduction gear should kick her along at a fair rate of speed. Her ballast will total 9,000 pounds of which 4,000 will be inside, a distribution of weight which tends to make for an easy motion in a seaway.



Sail plan and outboard profile of shoal draft ketch



Accommodation plan, showing a well laid out and roomy cabin



Sheer, half-breadth and body plans of auxiliary schooner. She is a light displacement boat and should be easily driven

DESIGN FOR A CRUISING SCHOONER

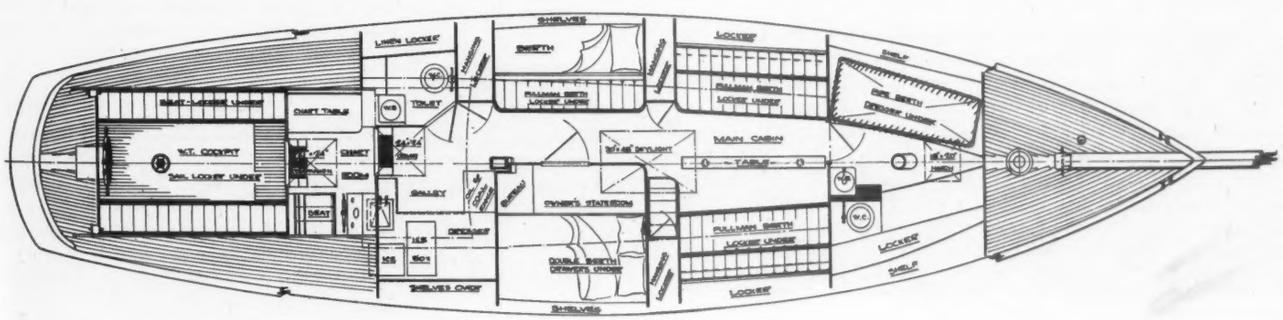
HERE are the plans of a cruising schooner yacht planned to accommodate five or six persons on extended trips along the coast. She is from the board of H. Miller Nichols, of South Dartmouth, Mass. The boat is short-ended and fine lined and, with her comparatively light displacement, should be easily driven. Her principal dimensions are as follows: Length over all, 50′ 10″; length on the water line, 43′ 6″; beam, 12′ 3″; draft, 7′ 0″. Her displacement is 41,000 pounds — less than is required by the Universal Rule — and she carries 15,700 pounds in an iron keel with about 1500 pounds of trimming ballast inside. The sail area of the four lowers is 1492 square feet. Fisherman staysail and other light sails are arranged for.

The plans show a model of easy form, with long fore and aft lines, so that she should have a fair turn of speed. As auxiliary power, a light motor developing 35 to 40 horse power, with reduction gear, should shove her along at a fair pace. Two shaped tanks for gasoline are fitted, one each side of the chart room, and a tank for potable water, of 190 gallons capacity, is located forward, just abaft the rope locker. The motor is under the floor of the doghouse and light sails are stowed below the cockpit. A grating in the floor of the sail locker gives access to the shaft stuffing box.

Sail plan and cabin plan

The cabin arrangement is interesting. The forecastle may be used for a paid hand. The owner's room has a double berth. The cabin has uppers and lowers and also a berth in the passageway. The galley is aft, handy for serving meals in the cockpit.

An auxiliary steering wheel in the doghouse, thrown in or out of gear at the main wheel, will be convenient in bad weather.



WHAT OUR READERS SAY

AIR IN MOTION

Editor, YACHTING:

▶ One of your readers writes in your October issue regarding the relative "weight" of winter and summer winds. Years ago, in Wareham, Captain Joe Burgess, who befriended me in my early years of sailing, remarked one time that reefs would have to be taken in much sooner in winter than in summer. The occasion I recall well. We were watching a schooner loaded with sand until her deck was awash amidships. In one of those really strong Buzzards Bay summer so'westers, she had all lowers set but stood up like a church. Being young, I asked Captain Burgess why there was any need of reef points so far up her sails, because I could not imagine their ever being necessary. He immediately replied: "If this were a winter wind, it would take the sticks out of her if she did not reef." He then proceeded to caution me against taking any chances with the wind in the late fall when "the air gets colder and heavier."

▶ Coming back again to the question of puffs of wind. Blue Hill Observatory now has a device for measuring them. I understand it is not yet perfected to the scientific accuracy desired but, even with much allowance for error, it shows surprising results. In a four-mile wind, sudden puffs up to twenty miles will be registered. In a forty-mile wind, there was acceleration in less than a second to eighty — and as quick deceleration. It is probable that, as these puffs advance, they displace air to their sides and cause a drop of pressure behind them. I believe their study has just commenced.

GREGORY W. GROVER

Boston, Mass.

"SHIPS AND SHOES AND SEALING WAX"

Editor, YACHTING:

▶ I came over in a wretchedly dirty and nasty old ship, but I got my fifty-three birds all home to roost. I sometimes wonder if you fellows ashore realize what an armada some of these big convoys are. Mine this time, for instance, was 6½ miles broad and 1½ to 2 miles deep. Getting on for 63, I find myself very weary when I arrive after one of these trips; and this is my 28th. I long for absolute solitude, my book, the sun, or a good log fire — complete silence, if possible. What is it we foolish human beings are after, anyway? Is death the only cure for the calamity of being alive and too poor to command peace? And is peace of mind possible in any case?

▶ A. G. H. Macpherson * was a most unusual man for, besides being a great voyager in a very small yacht he had a fastidious artistic taste. His monumental collection of sailing ships and sailing yacht prints is now housed in a special department of the nautical museum at Greenwich. Next to the reconstructed and rigged *Victory*, now lying in a special dock of her own at Portsmouth, I suppose his prints are the finest record we have of the glorious period when the Winds of God were the only power needed or obtainable by sailors. Macpherson was a tall man with no superfluous flesh. He had a fine, strong face and a quiet manner. He made light of weather encountered in our stormy seas, and must have been an ideal shipmate in a small yacht. We all admired and liked him, and the Royal Cruising Club felt honoured in that he always flew our burgee. I may mention that Macpherson gladly suffered an enormous financial loss in order to ensure that his collection remained in England.

▶ The miracle performed by "H.O. 214" combined with the Air Almanac has, I suppose, pretty well swept the board. I have introduced it to the young mates of many ships. Commander Ageton has now improved on his "H.O. 211" by the issue of his ingenious "Manual of Celestial Navigation," 1942. His new Table II and his new short method of computing the Azimuth make his invention a rival (only slightly astern) of H.O. 214. I always take his book with me to sea as a stand by, and it might well be convenient to rely entirely upon it in a small yacht, on a long voyage, when the space for six volumes of H.O. 214 would be begrudged. Major Cooke's example of H.O. 211 hardly does justice to Commander Ageton, since the arrival of his latest publication has so much simplified his method. George W. Mixter's "Primer of Navigation" is so popular that no praise of mine can enhance its value. It is the only up-to-date and readable treatise I know but was, unfortunately, published before Commander Ageton produced his new tables.

I enclose a form I have had printed for my own use when using Ageton's new tables. It includes everything that one can do with a single sight, also everything that one requires to work it out. The result is the same, but the Azimuth must be laid off from the "Assumed" latitude and longitude, not the D. R. position.

POSITION LINE BY AGETON, 1942, SHORT METHOD.

If P.M. add 12hrs. The Assumed Long. must be less than 30′ from the D.R.	Date. Ship time. D.R. Lat. D.R. Long. Body. Bearing by Comp.	7 A.M. June 26 34°–01′ N. 64°–37′ W. Sun. N & E. 89°
Long. W. add. E. subtract.	Ship time Long.	26d–07h–00m 4 –18+
G.D. & G.C.T. (G.M.T.) should be roughly the same.	G. Date.	11h–18m 26th
Chron. being set to G.C.T. (G.M.T.) Subtract.	Time by Chron. Stop Watch.	11h – 7m – 1s 5 – 10 —
Slow add. Fast subtract.	Chron. error	11h –1m–51s 2 – 30 S
Note Date. From page for day. For hours & minutes. For seconds or S.H.A. (Air Almanac).	G.C.T. (G.M.T.) G.H.A. Corr. Corr.	11h –4m–21s 26th 329°–20′·5 16 –16 · 5 ·3
Choose Long. to make whole degrees. W. take Diff. E. take sum.	G.H.A. Exact. Assumed Long.	345°–25′·8 64°–25′·8
L.H.A. greater than 180°. "t"=360—L.H.A. Mark t E. or W. Choose nearest whole degree of Lat. " Lat. & t " gives **B**, K & Z′. Table i.	L.H.A. t Assumed Lat.	281° 79°E. 34°N.
Give K same name as Lat. If t is greater than 90°, K=180—K′.	Declination. K. ◄	23°–22′ N. 74°–12′·3 N.
Add different names : take Diff. same names.	K ⌒ Dec.	50°–50′·3
" K ⌒ Dec." gives B. Table ii. Add " B & **B** " : mark result A.	B. **B.** ◄	B. 19957 **B.** 23572
"A" gives Calculated Alt. (Hc). Table ii.	A. Calc.Alt. (Hc). True Alt. (Ho).	A. 43529 21°–32′ 21°–18′·5
True Greater—Towards (T.G.T.). Less—Away.	Intercept.	Away 13·5
"Alt. & **B** " give Z″. Table i. Add Z & Z″ unless K is greater than 90° or K is same name & less than Dec.	Z′ ◄ ► Z″	Z′ 19°·2 Z″ 55°·9
Mark Z N or S as Lat : E or W as " t " If Z is N & E, Z_N=Z. If Z is N & W, Z_N=360—Z. ,, ,, ,, S & E, Z_N=180–Z ,, ,, S & W, Z_N=180+Z.	Z (Azimuth). Z_N (by the 360° rose)	Z. N 75°·1 E. Z_N 75°·1
Tenths of Sixty. 6 12 18 24 30 36 42 48 54 0·1 0·2 0·3 0·4 0·5 0·6 0·7 0·8 0·9	Obsd Alt. Index. Error. Corr. Ht Eye.	21°–8′·4 0 10·1
	True Alt. (Ho)	21°–18′·5
True to Magnetic. E. Varn—. W. Varn + From Chart.	True Bearg-Azimuth Variation.	75°·1 12° W.
Magnetic greater than Compass. Deviation E Magnetic less than Compass. Deviation W.	Magnetic Bearing. Compass Bearing.	87°·1 89°·0
	Deviation.	1·9 W.

M. L. GOLDSMITH
(*Commodore, Royal Cruising Club, Member, The Cruising Club of America*)

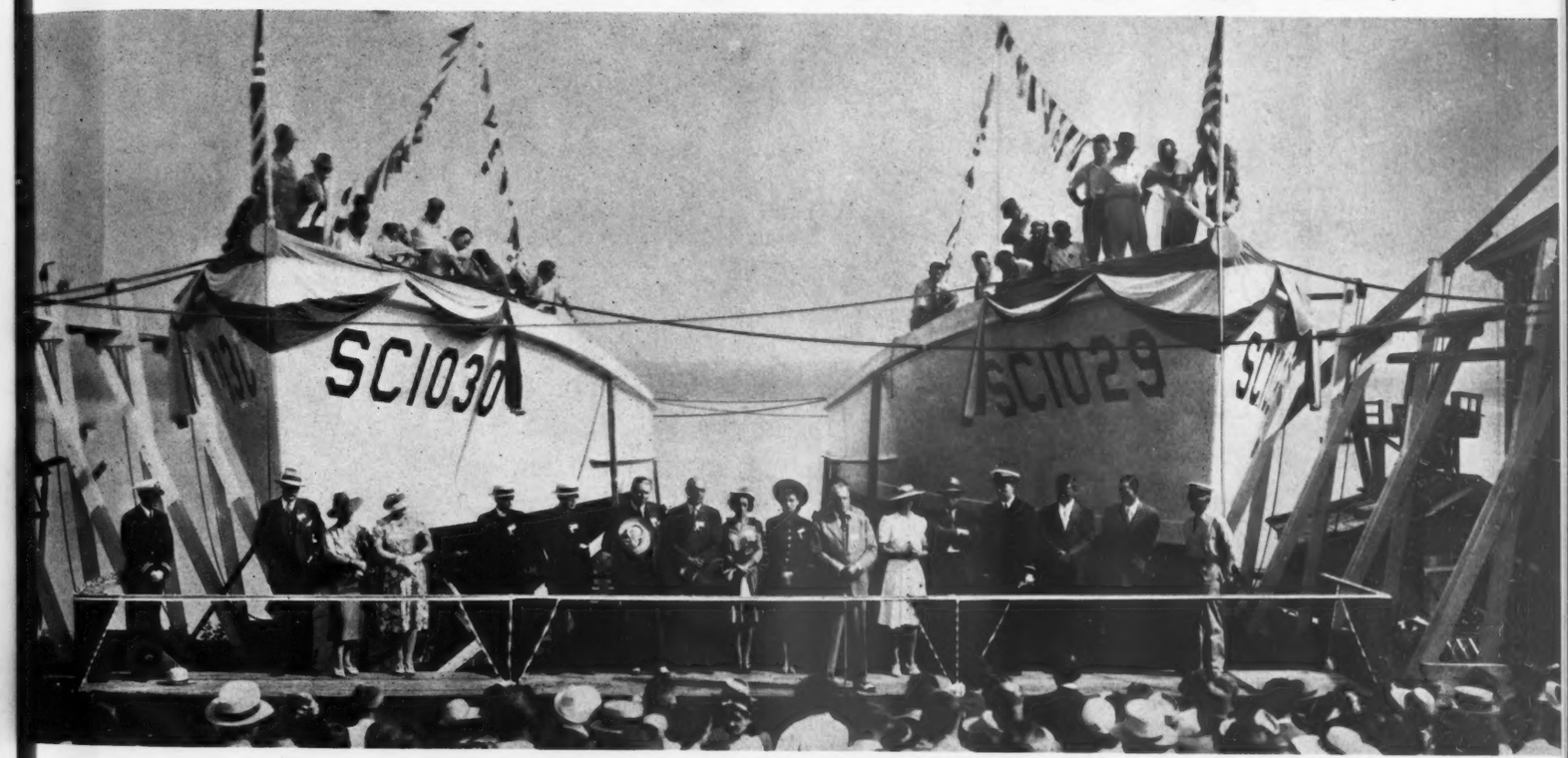
England

(Continued on page 130)

* *Mr. Macpherson, creator of the world-famous collection of maritime prints bearing his name, died recently. — Ed.*

Rosenfeld

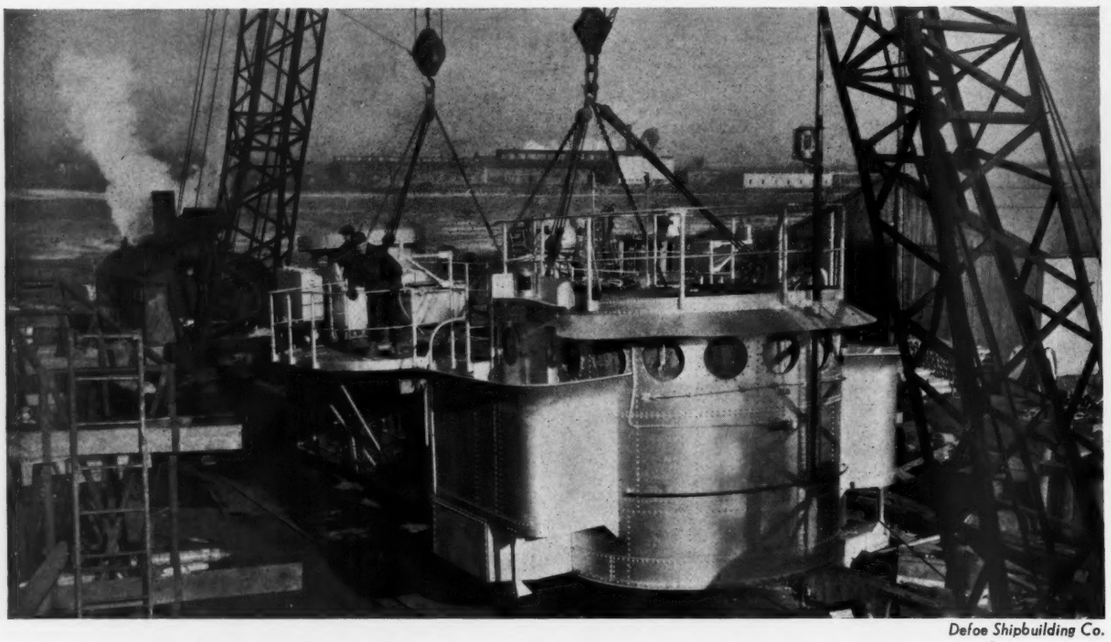
PRODUCTION



McAllister

PROGRESS

Elco-Rosenfeld



Defoe Shipbuilding Co.

Throughout the country, yards which, in time of peace, have busied themselves building yachts, have, under the urge of wartime needs, devoted all their facilities to turning out small ships for the Navy

THE NAVY SMALL SHIP PROGRAM

By REAR ADMIRAL E. L. COCHRANE, U.S.N.

Chief, Bureau of Ships, United States Navy

THE NAVY is deeply indebted to the smaller ship and yacht builders of the country for the splendid effort which they are putting forth in the construction of the small ships required by the Navy in the present emergency. I have used the term "small ships" because most of those which are now being produced are ships within the Navy terminology and, as such, are required to take their share of the Navy's responsibilities in the Seven Seas. Many of them, which were originally designed for coastal service, have successfully completed passage to distant stations under adverse weather conditions and with far less preparation than we should have liked to have been able to give them.

The designs for many of these little ships were developed by the small commercial and yacht building yards or by people who, before the war, were primarily interested in the yachting industry. That they have performed the services required of them almost without exception is a matter of gratification to us, as I am sure it must be to the industry itself.

The pages of YACHTING have carried from month to month some descriptions and indication of the types to which I refer. The 173 foot PC's have brought out some remarkable ingenuity in detail design and in construction methods. These ships, while they have in some cases not been finished to the fondest desires of the officers and crews, have proved themselves thoroughly serviceable and have done exceedingly well within their limitations — which, incidentally, have been stretched to the utmost. The 110-foot wooden submarine chasers, for which the Navy is now using the World War designation of "SC," are a development of the corresponding craft of World War I and are also giving excellent service. The two classes of mine sweepers, the 96-foot AMc's and the 135-foot YMS's, also have been very satisfactory.

No statement of this sort would be complete without reference to the PT's, or motor torpedo boats, which have given such an outstanding account of themselves and which are now being produced in considerable numbers in highly effective designs.

In addition to all of these, there is an enormous number of boats for special duties, including the landings so effectively carried out in North Africa during November and in the Solomons in August. We are also building a considerable number of boats designed for a mission of mercy — one, however, that has a very material military value — in the rescue of aviators and aircraft who have suffered some difficulty. We have contracts out also for a very large number of less romantic types of small boats.

We feel that the performance of the small ship and yacht building industry has been outstanding.

Morris Rosenfeld

Two of Elco's PT's roar across New York Harbor during a trial run. Powered by Packard, these recent models are adding new laurels to their list of combat successes

ACHIEVING THE IMPOSSIBLE

From Coast to Coast, American Boatbuilders Are Constructing Ships of War Today that Yachts May Sail Tomorrow

By HERBERT L. STONE

THE tribute that Admiral Cochrane, Chief of the Bureau of Ships, pays at the head of this section to the industry that is turning out the Navy's small ship program is well deserved. No one who has visited any of the yards where these vessels are taking shape, who has seen the boats themselves, or who has access to the figures showing the progress of the work, can have any doubts on this score. The magnitude of the job the boat and engine builders of the United States have been asked to do in the last year, since Pearl Harbor, is beyond the comprehension of the layman. It was, perhaps, almost beyond what those in the industry themselves believed could be done.

Yards, laid out and equipped for the limited production of peacetime demands, have had to expand at an ever increasing rate, to accelerate deliveries many times over. Building stocks have been set up in open spaces adjoining former yards, so that many mine sweepers, submarine chasers or other hulls could take shape alongside of each other at the same time, giving thousands of men a chance to work on them where formerly only hundreds could be employed. Launching ways were laid, machinery erected, sometimes under temporary sheds, and stock piles accumulated so that the work could go on without delay. Night and day shifts have been in order to speed the work; difficulties in obtaining priorities on material (one of the chief bottlenecks) had to be overcome. And all this, mind you, in a boat and shipbuilding industry where, for decades, orders had been hard to get, where the facilities were appropriate only for a limited demand and where, except in those cases of standardized pleasure boat construction where fifty feet length was the limit, production seldom exceeded a few units a year.

Building ships is, of course, quite different from manufacturing automobiles, and is not, therefore, as capable of rapid production expansion as is possible in the big motor car factories of Michigan and Indiana. In the first place, many boats are built of wood where each process calls for individual handling and fitting. Secondly, most boats are of

Morris Rosenfeld

The 83' Coast Guard cutters, designed by Walter McInnis and built by Wheeler, have turned in an impressive performance record

Morris Rosenfeld

Substantial numbers of Vosper motor torpedo boats are being built in numerous American yards for the Royal Navy under Lease Lend contracts. This one is from the Annapolis Yacht Yard

different design, shape and size and each requires different molds and different bending in frames, planking — or plating, if the hull is a steel job. Thirdly, the larger vessels were too big and cumbersome to fit themselves into assembly line methods. That is, they were until our shipbuilders got busy on the job in this war.

Under the urge for speed, inspired by Messrs. Schickelgruber and Hirohito, the seemingly impossible has happened and, in many yards which heretofore relied on old standardized shipbuilding practice, we are now seeing hulls built in sections in various parts of the yard, to be assembled in one spot and welded together to complete the finished hull in a fraction of the time it formerly took. Even in wooden construction, when the hull is still built as an entity, versatile naval architects and shipbuilders are fabricating bulkheads, houses, superstructures and the like while the hull is being completed, and these are then fitted in place in the ship herself at the appropriate time. One well-known yard builds its steel hulls (up to 200 feet in length) upside down to simplify the plating and welding operations, and then rolls the whole ship over into an upright position for finishing and the installation of machinery. Methods such as these might make an oldtime shipbuilder turn over in his grave, but they are responsible for the unbelievable rapidity in ship construction that has marked the building program in this war.

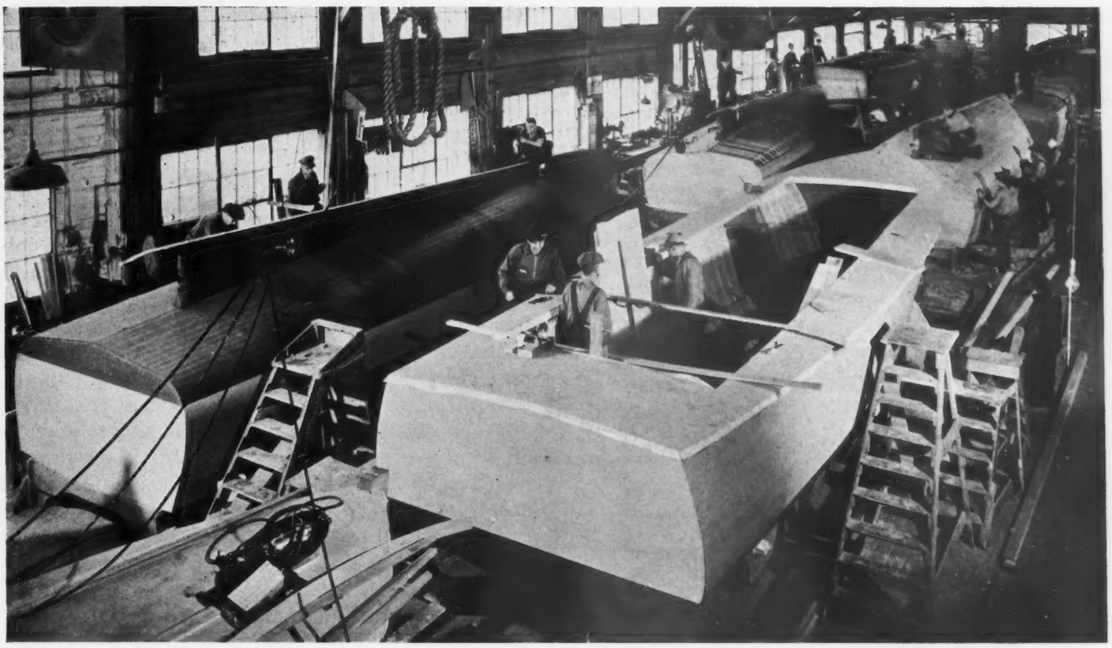
The building program for the Navy — and for the Army as well — while it covers many different sizes and types, also calls for many units of each type, and this, of course, has helped to speed production and to make for standardized operations. Wherever possible, yards and builders have been given as many units of the same model as they could handle and, in general, have been given the type of craft that they were best equipped to build and with which they were most familiar. Naturally, yards equipped for wood construction got wooden hulls, such as the mine sweepers and the smaller sub-chasers; steel building yards got steel ships; and the standardized pleasure boat manufacturers got the great fleets of small craft, the aircraft rescue boats, the motor torpedo boats and the like.

The diversity of the fleets now building is also remarkable. In what the Navy classes as its small boat fleet, roughly anything under 200 feet in length, are found many different types for many different operations. As an example of this diversity, a few may be mentioned here. Many of these are illustrated in this issue.

The Navy alone is building over twenty different types of

Official U. S. Navy Photograph

Increasing numbers of large tank landing barges such as this are being constructed by American shipyards. Note the let-down ramp bow



Boatbuilders also know the efficiency that can be achieved by the production line. Here are 38' picket boats under construction by the Richardson Boat Company

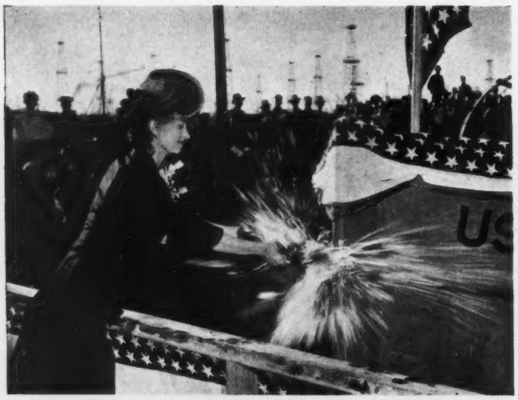
small craft under 180 feet in length, exclusive of the thousands of "small fry" such as wherries, life boats, and the like. They comprise steel sub-chasers (PC's) in several sizes, steel harbor tugs, wooden mine sweepers, coastal mine sweeps, sub-chasers, speedy motor torpedo boats (PT's), bomb target boats, aircraft rescue boats in several sizes, picket boats, landing boats, and many more.

The Army has quite a navy itself, and is building at many yards in the United States at least twelve types of boats under 100 feet in length. Many of these are boats for landing and amphibious operations, although others are for aircraft rescue work, for mine laying, for the Quartermaster Corps, etc. In addition, of course, the Army is procuring transports, troop-carrying barges, and many other types.

When it comes to the Coast Guard, the building program of this branch of the service has expanded tremendously. On the whole, the Coast Guard has kept to its standard types, enlarging and developing existing categories, and adding new types when the need for them was foreseen. The 165-foot steel patrol boat, Diesel powered, is an example of a fine seaworthy offshore vessel, which has proved herself most useful in escort and anti-submarine duty, while the new 100-foot and 83-foot wooden patrol vessels, with high speed, have been one of the main standbys in our coastal convoy work since the days of the harassing submarine attacks last spring and early summer.

One of the most spectacular developments is, perhaps, that of the motor torpedo boats (PT's) which have proved their value as an offensive weapon against enemy ships and convoys. The British had long favored such a type, and developed several classes before our Navy began using them. At present, we are building four types of these: those by Elco, who were the pioneer builders of the class in the United States; the Vosper type, as developed for the British Admiralty; and two other types, one developed by Higgins Industries and another by the Huckins Yacht Corporation. All are in the neighborhood of 80 feet in length, carry torpedo tubes and depth charges, numerous anti-aircraft guns,

A new note in SC sub-chaser design. The Peterson Boat Works has established an innovation by adding a windbreak atop the pilot house



Shades of Babe Ruth! New styles in ship christening as demonstrated by the fair sex. These were caught at the fateful moment at the Hodgson-Greene-Haldeman Shipbuilders, and the Tampa Shipbuilding Company

and have great speed. They are a complicated job of building, but they have proved both their worth and their stamina from the Philippines and the Solomons to the English Channel and the Mediterranean.

Progress Tabulated

The answers received to a questionnaire sent to those who are so busily engaged in producing for this great program of Navy and Army building, show how great a job is being done and are impressive as to the scope of the program. Exact figures, of course, cannot be given. Nor is it possible to mention specific names and numbers of boats individual yards or builders have under construction. It is against government policy to reveal this information. But the picture, in terms of percentages, can be given. It is most interesting.

A total of 115 yards reported. These included practically all those working on the "small boat" program, many of which were formerly engaged exclusively in pleasure boat construction.

Taking 1940 as normal at 100 per cent, employment in these yards rose in 1941 to 230 per cent, in 1942 to 660 per cent and the estimate for 1943 was 800 per cent. The latter figure is an eight-fold increase in three years.

Yard expansion has also been tremendous. Space had to be provided for these extra men to work. Of the forty-five yards reporting expansion by percentages, the average increase in plant expansion has been 175 per cent. Some showed increases of ten times over, or 1000 per cent. If the figures of those reporting by square footage, by increased numbers of ways and shops were added, the average increase would be well over 250 per cent. To this must be added the new yards, opened up during 1941 and 1942 and not engaged in building prior to that time.

Of the 109 yards reporting who were in the boatbuilding business before the war, all but three said they would go back to their regular line of work after the war and carry on as usual. Of the three, one said he was doubtful, one said it depended on conditions, and one did not answer the question either way. Some said they planned to expand their former production after the war. An optimistic sign.

Out of the 115 builders reporting, only 19 said they were receiving no government work. This was surprising considering the numerous complaints about the failure of the government to "spread the work."

All of these yards that had failed to receive government work were what might be termed "small yards" in that their facilities were limited and many of them were not geared to handle anything over 25 feet in length, and even this size in somewhat limited quantity. Only three of these yards could handle boats up to 45 feet in length. But the facilities they had at present were good, and were capable of expansion.

Most of these yards wanted government work up to their capacity. Many of them had adequate financial resources. Some yards that had but limited government work said they could, and would like to, handle more. Of the 19 who had no government contracts (they represent only 16 per cent, in numbers, of those reporting), seven could build only up to 25 feet in length, three admit their yards are too small, two have closed their shops for the duration, one says he cannot get skilled boatbuilders. Of the remaining six, all would like work, say they have not been able to get contracts and lay it to various reasons, frequent among these being "that they did not know the right politician."

The latter, of course, is not the real reason but it weighs on the applicant's mind, nevertheless. However, out of 115 representative builders, the fact that only six believe they are not getting work they are geared to, and want to do, is, after all, a rather small percentage. It does not, we think,

bear out the charge of discrimination that is sometimes made. As far as increase in production is concerned, the loss of volume by not using these yards is negligible in the over all picture, however serious it may be to the individual builder.

These are some of the things an analysis of the answers received show up. The total number of units under construction for the three branches of the armed services cannot, of course, be given. It reaches unbelievable proportions. The achievement of the goal set is a foregone conclusion, in spite of new orders and ever expanding totals that insure work for all for the duration, or for a long time in the future.

That the progress made in the past year is, on the whole, above what might have been expected in a suddenly expanded industry, and has been achieved in spite of shortages of vital material, of special equipment and the nation-wide scramble for priorities, is attested by the Navy and the combined Army-Navy E awards that have been made. Over many yards, these pennants fly proudly, a stimulus to those who have earned them and an incentive to those who will earn them in the future.

Top, plane rearming boats for the Navy and assault boats for the Army after completion at the Lyman Boat Works. Bottom, a big mine sweeper goes down the ways at the Tampa Shipbuilding Company

Special Processes Developed

IN MANY yards the skill and knowledge which was formerly used to produce light weight hulls for pleasure boats is now being employed in experimental projects and in new systems of construction, especially in the small boat programs for the Navy and Army, such as in pontoons and attack boats and even, under subcontracts, for glider and fighter plane parts. Much of this experimental work is, naturally, in using a process of moulding plywood hulls, and other structures.

This had been done to some extent before the war on small pleasure boat hulls, and several companies had worked on various aspects of the idea, including the Skaneateles Boat Company, which had developed a special Hydrolite process. This process involves a special bending, under heat and pressure, of thin wood veneers in such manner that the resulting piece has extraordinary strength and rigidity for its weight. Originally, the Hydrolite process was concerned with the moulding of one-piece boat hulls, such as dinghies and the like. It is now applied, among other things, to the moulding of leading edge skins for training gliders. These edges extend aft only to the main structural spar of the wing.

While construction details and many of the technical processes involved obviously cannot be described, it will be recognized that this work is requiring strict adherence to close tolerances which have been hitherto unheard of in woodworking. Many of the parts must match accurately with parts being made by other sub-contractors and the prime contractor.

The required stabilization of dimensions is teaching valuable lessons in precision and jigging — all brand new to the woodworking industry — and encouraging developments which certainly will mean a great deal to purchasers of small craft after the war.

Official U. S. Navy Photo

There is unceasing patrol along the entirety of our sea frontiers — patrols successfully conducted by the countless ships of the nation's "small boat Navy"

THE SMALL BOAT NAVY IS DOING A JOB

By HANSON W. BALDWIN

Military Editor of the New York Times

SUB-CHASERS, corvettes, converted yachts and small boats of many types are playing an important part in meeting the menace of German submarine warfare. The men of the "dungaree navy" have received few bouquets and rarely have they been picked out by the spotlight of fame — but they are doing a job.

Their little craft — so small that, in the words of a young sailor, "they jump around in a seaway like a cake of soap in a bathtub" — are patrolling thousands of miles of blue water and have been a factor in reducing the losses of our coastwise shipping. Sub-chasers, escort vessels and other types are also protecting deep sea convoys, and with their help sinkings were materially reduced during the late summer and early fall months. In November, sinkings apparently skyrocketed again — largely because of our losses incurred in the North African landings — and today, the Axis is intensifying its "wolf pack" attacks against our transatlantic convoy routes.

The war at sea is an unceasing one — and the battle against the submarine will never be completely won until the war is won. But the picture is far brighter than it was last winter, and this is particularly true in our coastal waters.

From dawn to dusk on a trip from New York to Norfolk with a convoy escorted by the Inshore Patrol, planes and blimps were constantly overhead and the cargo ships and tankers were escorted at all times by submarine chasers, trawlers, mine sweepers, Coast Guard cutters and other coastal escorts.

The convoy system in Atlantic coastal waters was begun in the spring of 1942 and so effective has it been that, between that date and the first of this year, coastal losses have fallen to near the vanishing point. Within the area from Maine to Florida under the jurisdiction of Vice Admiral Adolphus Andrews, commanding the Eastern Sea Frontier, a ship sunk or damaged by mine or torpedo is now a rarity. Defensive measures have been increasingly effective and today, though the Eastern Coast is still littered with wrecks and Hatteras is a graveyard of stout ships, the sub-chaser, the mine sweeper, the trawler, the blimp and the plane definitely have the upper hand in our coastal waters.

This does not mean that the submarine menace to our coastal shipping is ended, for the U-boat will be a threat as long as the war lasts. It does not mean that sinkings may not mount again on the Eastern Sea Frontier; indeed, intensification of the German submarine effort is expected and the Inshore Patrol is preparing for a renewed assault by the enemy. Nor does it mean that the problem of protecting shipping has been solved in other coastal areas or far offshore.

The convoy system in the Caribbean was started on a limited scale last summer, but it, too, is already showing effective results, though off Northern South America, in

Kent Hitchcock Photo

Trim as a yacht and bright as a new penny, SC 774 awaits her launching at the yard of the Peyton Company

mid-Atlantic on the Murmansk route, and in other areas of the world, sinkings are still high. Many areas are not yet adequately protected by planes and the convoy system has not yet been extended to all critical regions. And there are not yet enough escort vessels.

Last winter and spring, trained officers and trained men were at a premium; crews were red-eyed from lack of sleep. Ships were cruising thousands of miles each month with little opportunity for overhaul or repair. Officers and men, products of training centers throughout the country, are now beginning to be available in quantity, and their scoreboard to date is an impressive one.

It cannot yet be said, however, that the submarine menace in the Western Atlantic has been completely licked; indeed, the history of warfare shows that the advantage continuously shifts from defense to offense and vice versa. Nevertheless, from a very bad beginning, when this hemisphere's shipping lanes were admittedly caught with grossly inadequate protection, we have now progressed to a point where the balance of power in the war of attrition at sea is on our side — in so far as the Western Atlantic is concerned.

What the services have done and are doing to protect our shipping has been, and is, a tribute to American courage and efficiency, and to the ingenuity and resourcefulness of officers and men. We have had to improvise and devise and organize. That period has now passed; gradually amateurs are becoming veterans, gradually sufficient ships and planes are becoming available to provide more efficient and less makeshift protection.

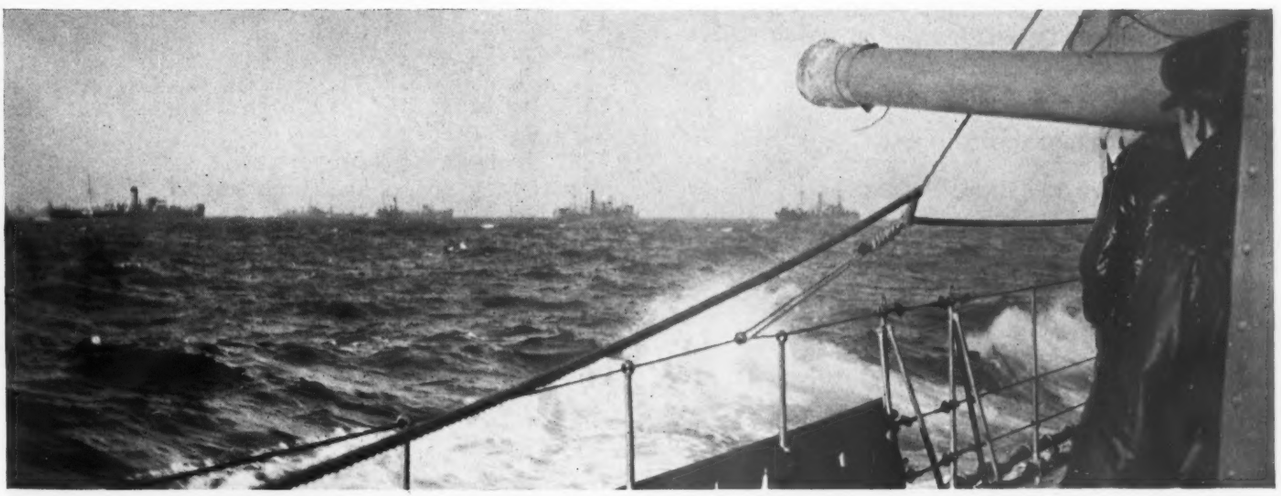
The next step must be to extend the convoy system to all dangerous areas; to increase the strength and number and skill of the escort vessels; to extend plane protection to all shipping routes; and to reorganize the system of routing convoys so as to eliminate all possible delays. For it must be remembered that the convoy system — which today, as it was twenty-five years ago, is still the principal protection against the submarine — had greatly slowed up shipping everywhere.

In the war against the submarine, planes and blimps have been among the principal offensive and defensive weapons. On this trip from New York to Norfolk, planes and blimps were everywhere. In daylight hours, our convoy was never out of sight of one or more aircraft. The planes were of all types, from tiny red-painted Cubs of the Civilian Air Patrol to Navy torpedo planes or seaplanes and Army bombers. One or more blimps circled majestically to seaward of our convoy.

On the surface, the major work of protection is being done in increasing measure by the sub-chasers of the Navy's growing PC fleet — 110-footers and, especially, the new steel-hulled 173-footers. There are many other new types of anti-submarine vessels under construction, including the famed corvettes and the so-called "destroyer escorts." Coast Guard cutters of various sizes, British trawlers and corvettes are also doing yeoman's service. Some Coast Guard cutters as small as eighty-three feet have bobbed along in the wake, or off the beam, of convoys, and in one section of the coast small boats of various sizes were under way 16,000 hours in one month and cruised a total in that month of 54,000 miles.

Today, hundreds of officers and thousands of men handle hundreds of smaller warcraft of all types; nets and minefields

(Continued on page 177)



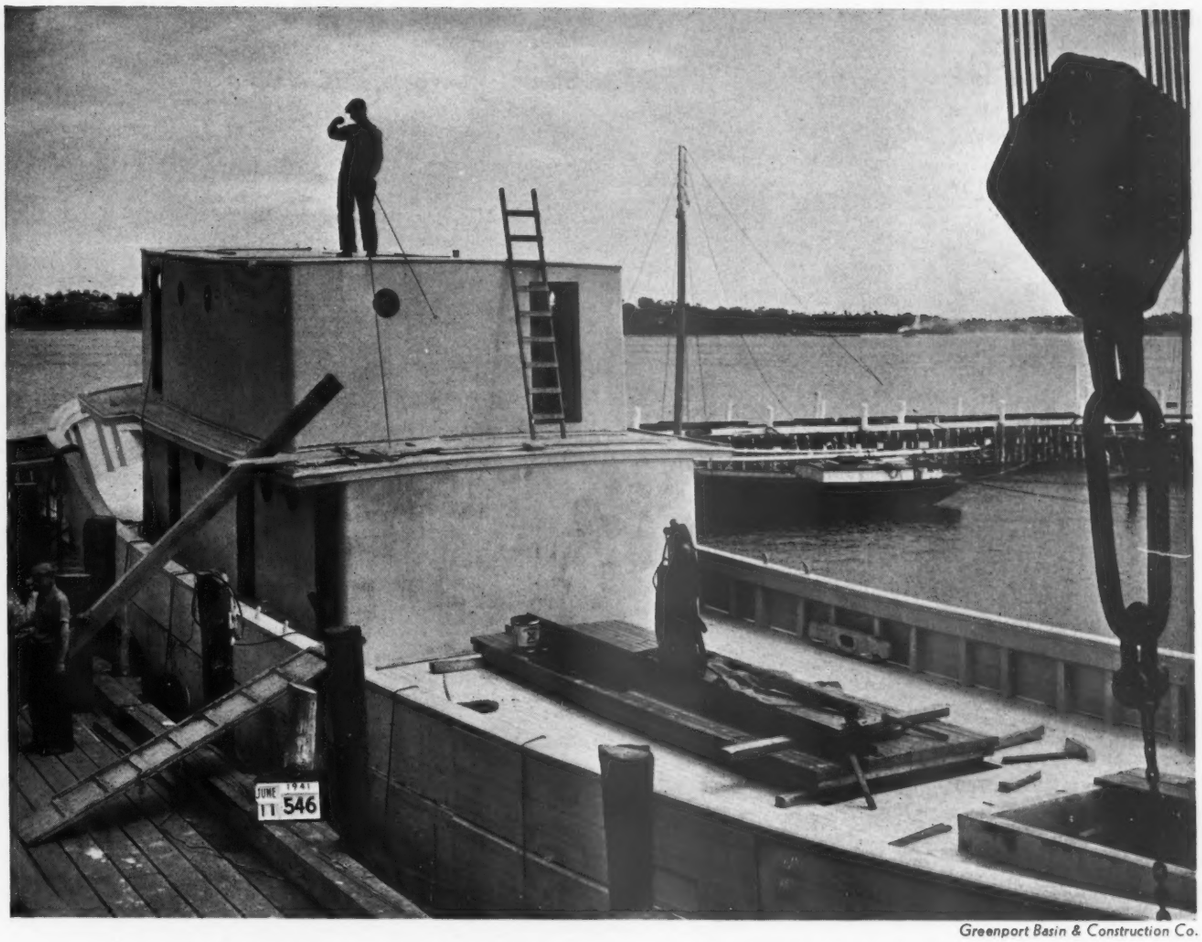
Big ocean convoys, such as this, consist of an armada of merchant ships. Stretching as far as the eye can see, they are constantly guarded by ever-watchful escort vessels

NAVAL WARCRAFT DESIGNATIONS

SUBJECT: For purposes of classification, all vessels in the United States Navy (other than motor yawls, small launches, etc.) are designated by alphabetical symbols. Viz., coastal minelayers are designated as CMc.

Designations are subject to change and new ones are added from time to time. Certain of these fall under classification of restricted information.

AD	Destroyer tenders
AE	Ammunition ships
AF	Storeships
AG	Fleet auxiliaries (misc.)
AH	Hospital ships
AK	Cargo ships
AL	Lightship
AM	Mine sweepers
AN	Net tenders
AO	Oilers
AP	Transport
AR	Repair ships
AS	Submarine tenders
AT	Tugs - ocean going
AV	Seaplane tenders - large
AKD	Deep-hold cargo ships
AKI	Cargo - stores issue ships
AKV	Aircraft supply ships
AMb	Harbor (base) mine sweepers
AMc	Mine sweepers - coastal
AOG	Gasoline tankers
APL	Barrack ships
APV	Airplane transports
ARD	Floating dry docks
ASR	Submarine rescue vessels
AVD	Seaplane tenders - ex-destroyers
AVG	Aircraft escort vessels
AVP	Seaplane tenders - small
AVR	Aircraft rescue vessels
BB	Battleships
CA	Heavy cruiser
CL	Light cruiser
CM	Minelayer
CMc	Coastal minelayer
CV	Aircraft carrier
DE	Destroyer escort
DL	Destroyer leader
DM	Light minelayers
DMS	Fast mine sweepers
DD	Destroyers
PC	Submarine chasers (steel - 170', 173', 175' and 180' O.A.)
PCS	Submarine chasers (wood-136' O.A.)
PG	Gunboat (over 1,000 tons)
PR	River gunboat
PT	Motor torpedo boats
PTC	Motorboat submarine chasers
PY	Converted yachts (500-1,000 tons)
PYc	Coastal yachts (under 500 tons)
SC	Submarine chasers (wood - 110' O.A.)
SM	Mine-laying submarines
SS	Submarines
YA	Ash lighters
YC	Open lighters
YD	Floating derricks
YE	Ammunition lighters
YF	Covered lighters
YG	Garbage lighters
YH	Ambulance boats
YM	Dredges
YN	Boom (net) tenders
YO	Fuel oil barges
YP	District patrol vessels
YR	Floating workshops
YS	Stevedoring barges
YT	Harbor tugs
YW	Water barges
YAG	Unclassified yard craft
YCF	Car floats
YCK	Open cargo lighters
YFB	Ferry boats and launches
YHB	House boats (floating barracks)
YHT	Heating scows
YMS	Motor mine sweepers
YNT	Motor tugs
YNg	Gate vessels
YOS	Oil storage barges
YPD	Floating pile drivers
YPK	Pontoon stowage barges
YRC	Submarine rescue chambers
YSD	Seaplane wrecking derricks
YSP	Salvage pontoons
YSR	Sludge removal barges
YTT	Torpedo testing barges



Greenport Basin & Construction Co.

In a matter of weeks this nearly completed mine sweeper will be heading out to sea on her trial run

"ENGINES, ENGINES AND MORE ENGINES!"

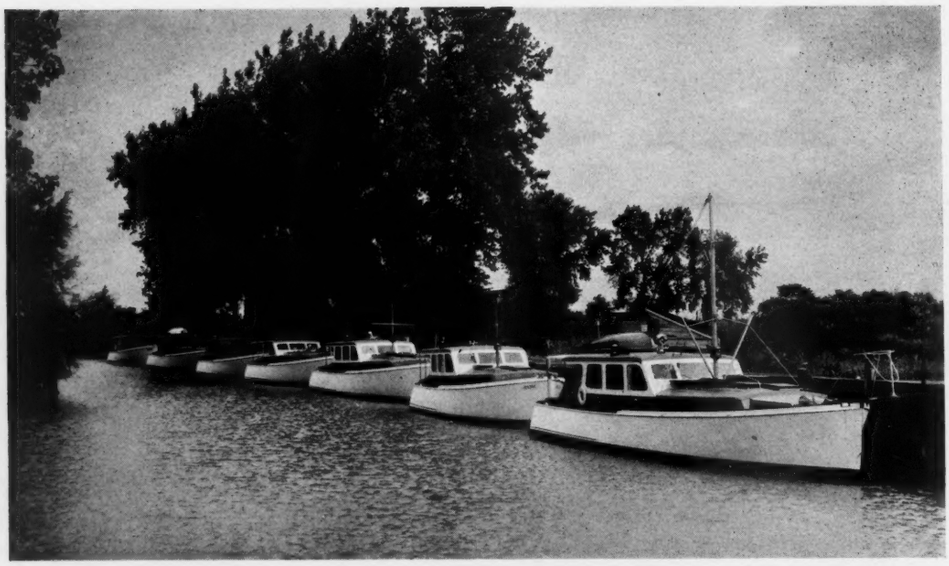
In less than a Year American Marine Engine Manufacturers Have Achieved a Production Record Which Has Yet to Be Surpassed

TOO MUCH cannot be said in praise of the major part which American engine builders, both large and small, have played in the creation of the nation's hard-hitting and highly effective "small boat Navy." Editorially, however, regulations regarding national security prohibit specific mention of any factual evidence concerning production figures and it must, therefore, suffice to say that the signal "Well Done" might justly fly over every engine manufacturing plant in the country.

In retrospect, the job which has been successfully accomplished by these many companies would have been described as impossible if the production schedule which has been achieved had been announced a year ago. An examination of YACHTING's listing of representative small warcraft on pages 52 to 55 reveals a graphic picture of the infinite variety of boats employed in the war which are equipped with gasoline or Diesel propulsion units. To these must be added the countless numbers of auxiliary vessels not shown, in addition to the many types of experimental craft which may or may not now be in production. In addition to the power plants them-

A small flotilla of Army 40' work boats on a mass trial trip. Built by Palmer Scott, they are an adaptation of the Navy's famous motor-sailers

Top and bottom, these are the same trees and the same sky overhanging The Matthews Company yard, but the new fleet was never meant for pleasure boating. Center, a British patrol vessel which the company has built on a Lease Lend contract



selves, the building specifications of each one of these craft — either seaborne or amphibious — call for a variety of auxiliary units for the purpose of supplying current for lighting and various operational functions.

The problem of manufacturing engines for Navy, Army and Coast Guard vessels has been further complicated by the fact that standard motor units which had been in production in the years prior to the war did not, in all cases, meet specification requirements. The resulting task of designing new motors and modifying old ones has made the past twelve months a period of endless complications. Weeks and even months have gone into new designs, but only time could bring out the "bugs" which are so apt to develop during factory and operational tests. Not only were the engine manufacturers faced with discovering the ways and means of overcoming such obstacles, but they were also dependent upon subcontractors solving their own problems without retarding the delivery of essential parts.

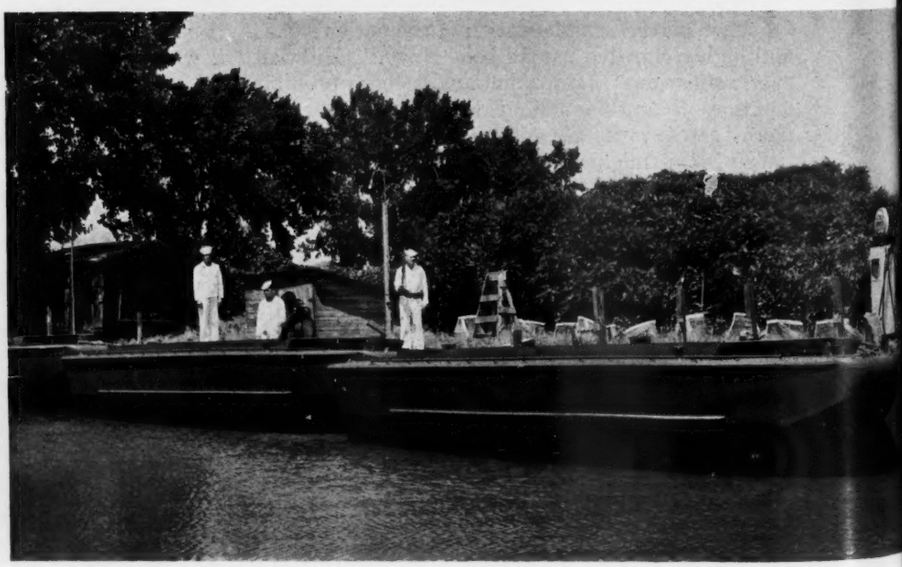
Whereas delays in securing materials is an inevitable factor in a wartime economy, the highly mechanized warfare of World War II has created a new technological bugaboo — skilled manpower. As the availability of machine tools was one of the principal production hurdles in the early months of the war, so manpower has risen to assume the role of the x quantity of today. Engine manufacturers were quick to recognize the necessity of establishing effective methods of training apprentice workmen quickly but thoroughly. Training schools are now established in a great majority of the nation's machine manufacturing plants, and the rapidly-mounting number of their graduates is supplemented by trainees from the many public and private technical schools which are operating on 18-hour-a-day schedules throughout the country.

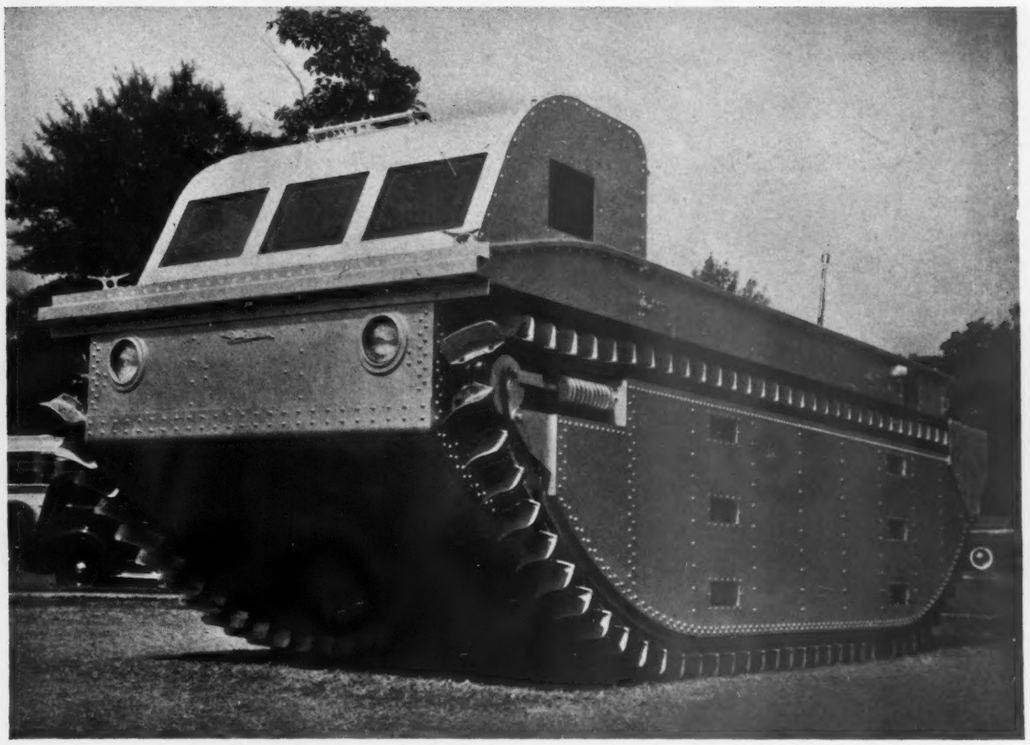
The following survey of the leading engine manufacturers of the United States gives a comprehensive picture of the character and extent of their wartime production. Although the following tabulation is not conclusive, it is as complete as wartime limitations will permit. It should be noted that nearly all of these companies are devoting their entire facilities to wartime production.

Atlas Imperial Diesel Engine Co., Oakland, California.
Engines for work boats, and tugs for the Army.

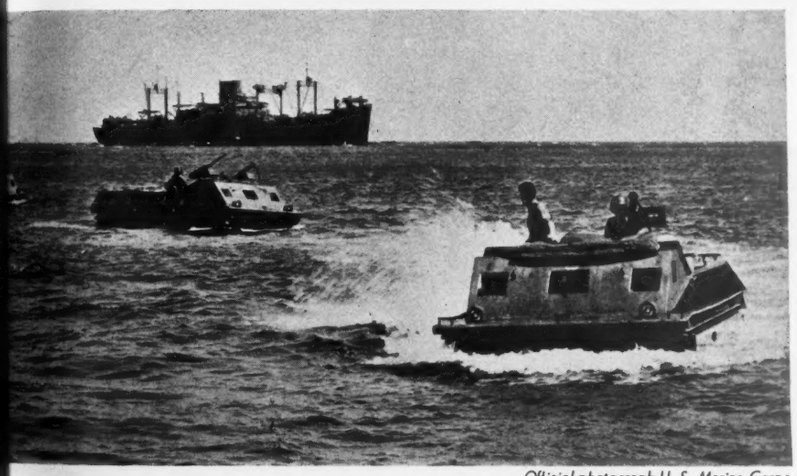
Buda Company, Harvey, Illinois.
Engines for motor-sailers, landing boats for the Army and Navy.

Bucyrus-Erie Co., South Milwaukee, Wisconsin.
Engines for lighters for the Navy.

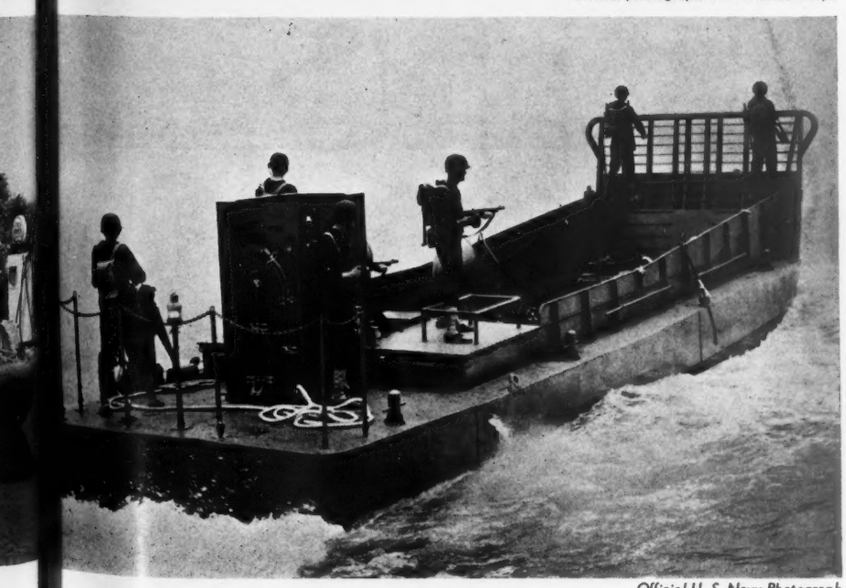




Top, looking like a Jules Verne creation, the modern amphibian tractor can go almost anywhere. Center, here they are used to bring reinforcements from a Navy transport anchored off-shore. Bottom, a landing barge manned by a Coast Guard crew. From official U. S. Navy and Marine Corps photographs



Official photograph U. S. Marine Corps



Official U. S. Navy Photograph

Chrysler Corp., Marine Engine Div., Detroit, Michigan.
Engines for plane rearmament boats for the Navy, landing boats for the Army and Navy, picket boats for the Navy, fire boats for the Coast Guard, patrol boats for the Army and Navy, life boats, aircraft rescue boats for the Army, and work boats for the Army.

Cooper-Bessemer Corp., Mount Vernon, Ohio.
Engines for mine sweepers for the Navy and motor tugs for the Army and Navy.

Chris-Craft Corp., Algonac, Michigan.
Engines for bomb target boats for the Army, crash boats for the Army, fire boats for the Army, launches for the Army, Navy and Coast Guard, picket boats for the Navy, and life boats.

Continental Motors Corp., Muskegon, Michigan.
Engines for picket boats for the Navy.

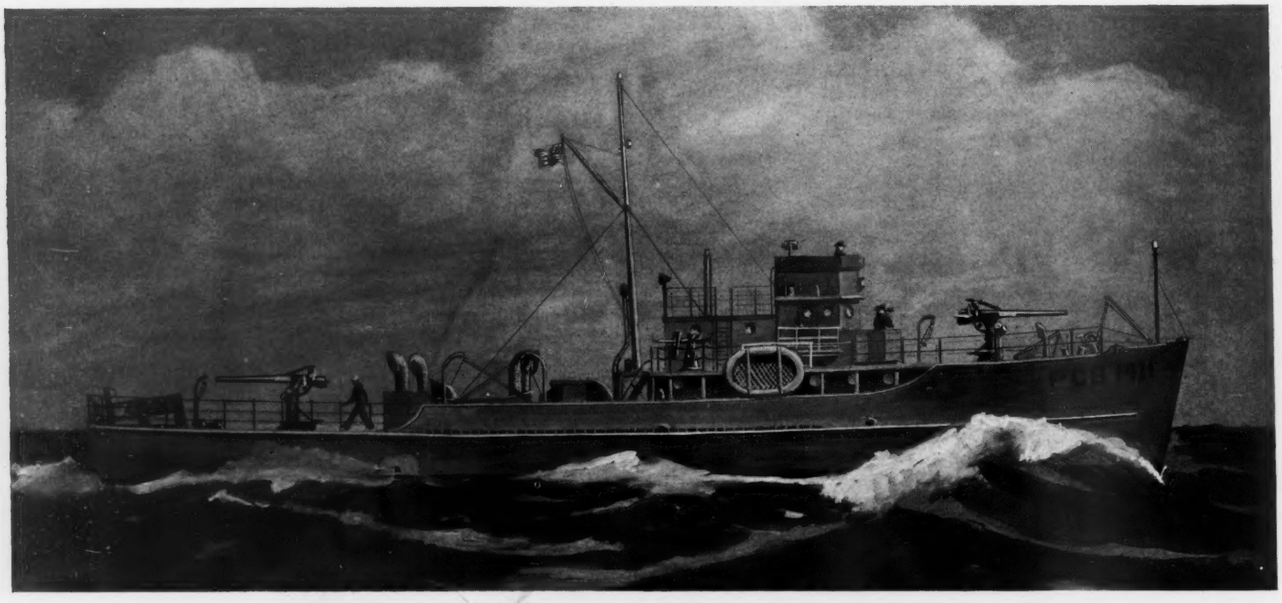
Cummins Engine Co., Columbus, Indiana.
Engines for tugs for the Army.

Enterprise Engine & Foundry Co., San Francisco, California.
Engines for tugs for the Army.

Evinrude Motors, Milwaukee, Wisconsin.
Outboard motors for the Navy, Coast Guard, U. S. Marines, U. S. Engineers, U. S. Quartermaster Corps, U. S. Coast & Geodetic Survey and British Commandos.

Fairbanks-Morse & Co., Chicago, Illinois.
Engines for tugs for the Army, sub-chasers and mine sweepers for the Navy.

General Motors Corp., Cleveland Diesel Engine Div., Cleveland, Ohio.
Engines for sub-chasers for the Navy, mine sweepers for the Army and Navy, patrol boats for the Navy and tugs for the Navy.



Top, a new submarine chaser type is the PCS, which reveals a family resemblance to the YMS motor mine sweeper. A modification of that design by Cox & Stevens, they are fitted with two dual-purpose guns — one forward and one aft, in addition to smaller A.A.'s. Right, completed landing barges at the Owens plant awaiting shipment

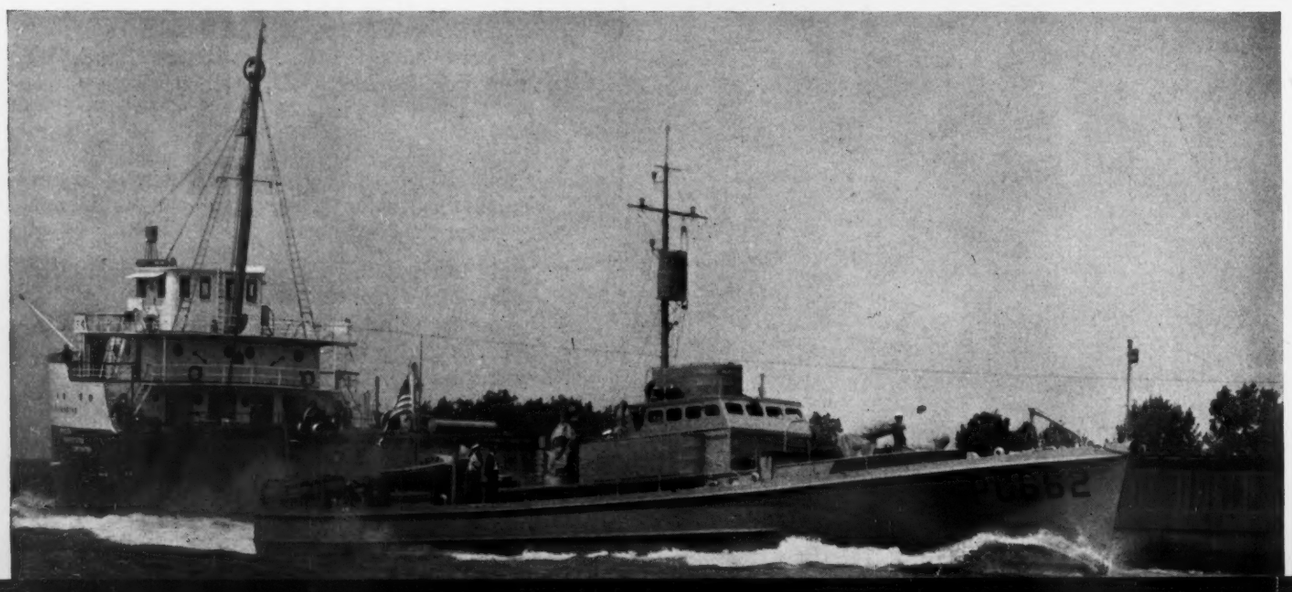
General Motors Corp., Electro Motive Div., La Grange, Illinois.
Engines for sub-chasers for the Navy.

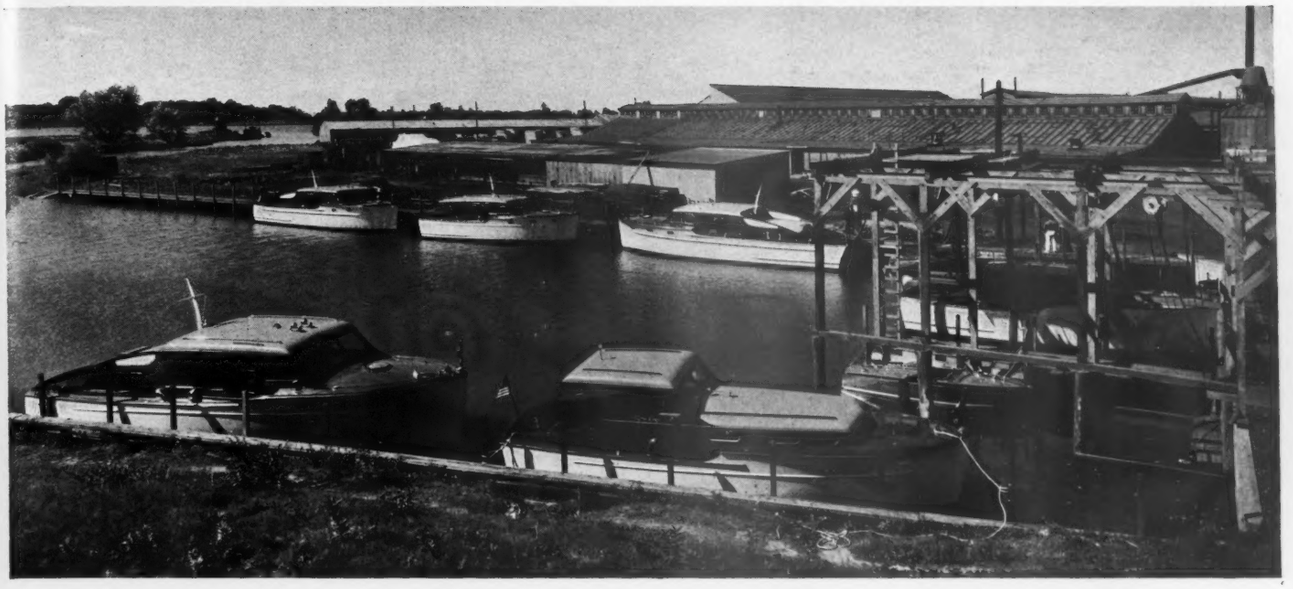
Gray Marine Motor Co., Detroit, Michigan.
Engines for work boats for the Army, Navy and Coast Guard, tank lighters for the Navy, patrol boats for the Navy and Coast Guard, landing boats, numerous vessels for Lease-Lend, life boats, and cutters for the Navy.

Hall-Scott Motor Car Co., Berkeley, California.
Engines for aircraft rescue boats for the Army and Navy, picket boats for the Coast Guard, landing boats for the Navy, bomb target boats for the Navy, "Fairmiles" for the Royal Canadian Navy.

(Continued on page 177)

Right, the Oxford Boat Yard made a new lady out of this World War sub-chaser. Bottom, a study in contrasts. This SC by Fisher slides past a lake carrier transporting a cargo which 662 may later protect in an ocean convoy





Chris-Craft, which created these sleek cruisers in more peaceful days, is now employing its efforts in the construction of the warcraft shown below

EQUIPPING AMERICA'S FIRST LINE OF DEFENSE

The War Production Schedule has Enlisted Every Branch of American Industry, and of These the Marine Equipment Manufacturers Stand in the Front Rank

THERE are few, if any, instruments of destruction more complex in design, construction and operation than a fighting ship. Designed both to inflict punishment and to absorb it, constructed so as to withstand the rigors of both sea and combat, and of necessity operated so as to achieve a maximum efficiency at all times, the ships of the Navy, Coast Guard and the Army represent the pinnacle of the skill of the entire marine industry. But no ship could progress beyond the designing stage if it were not for the hundred and one devices and types of gear — ranging from basic materials to the pot on the galley stove — which go into her making. Nor could she perform her appointed task without the installation and operation of the equipment which contributes so greatly to the efficiency of every phase of her performance in the service for which she was designed.

To the marine equipment manufacturers of the country goes all credit for achieving a record of production which, in the first year of war, has been in many ways unique. YACHTING'S survey of this important field of the marine industry has, of necessity, been restricted by reason of the Government's sane and sensible belief that what Herr Hitler doesn't know won't do him any good. However, we are able to give the following production report which is based on statements submitted to this magazine by the industry:

C. A. Woolsey Paint & Color Co., Inc., New York, N. Y.

Furnishing specification and commercial products for Navy, Maritime, Coast Guard, Army and other Federal agencies' requirements. This company reports that it is still in a position to fill all kinds of civilian requirements.

Link-Belt Company, Indianapolis, Ind.

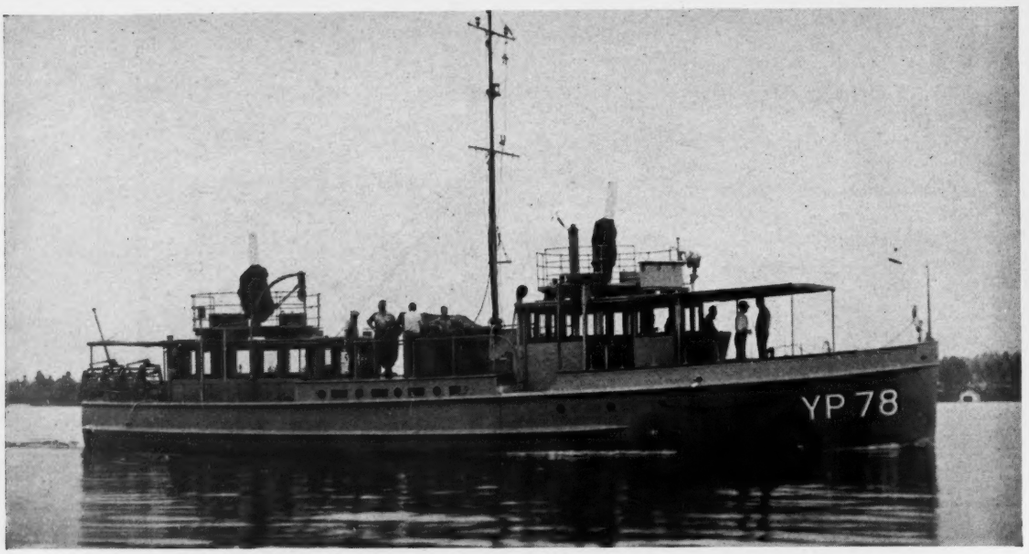
Silverstreak silent timing chain drives, Silverlink roller chain drives, flexible couplings, crawler chains for amphibious tanks, ammunition hoist chains.

Morse Chain Co., Detroit, Mich.

Reduction gears, Morflex Radial, propeller shafts and couplings. Production increased 400 to 500 per cent in 1942.

L. E. Jones Co., Menominee, Mich.

Main sea chests, rudders, stocks, rudder posts, struts and hull bearings, terminal tubes, bronze valves, toggle pins and watertight hatch dogs. Production increased 90 per cent in 1942.



Above, future Admirals at Annapolis do much of their training on YPs, which permit chart work to be done on a wholesale basis. Hutchinson's Boat Works and Elscot Boats are the builders of these two. Bottom, an aircraft rescue boat for the Army is launched by Dachel-Carter

The Auto Engine Works, Inc., St. Paul, Minn.
Marine reverse gears, reduction gears and angle drives. Production increased 30 per cent in 1942.

The American Pad & Textile Co., Greenfield, Ohio.
Kapok life preservers. Production increased 100 per cent in 1942.

Attwood Brass Works, Grand Rapids, Mich.
Marine hardware and fittings. Sales have been 300 per cent greater than in 1941.

Atwood-Koenig Co., Seattle, Wash.
Naud Electric clutch control. Production increased 600 per cent in 1942.

Baldwin-Duckworth Co., Springfield, Mass.
Flexible couplings and shaft couplings. Production increased 100 per cent in 1942.

Barbour-Stockwell Co., Cambridge, Mass.
"Reliance" tachometers, shafting and fittings. Production increased 80 per cent in 1942.

Bendix Aviation Corporation (Marine Division), Brooklyn, N. Y.
Marine signalling, communicating and lighting equipment, automatic steering and remote control systems. Production increased 100 per cent in 1942.

Blackmer Pump Co., Grand Rapids, Mich.
Various types of power and hand pumps. Production increased 95 per cent in 1942.

G. C. Breidert Co., Los Angeles, Cal.
Breidert Marine Air-X-Hauster. Production increased 100 per cent in 1942.

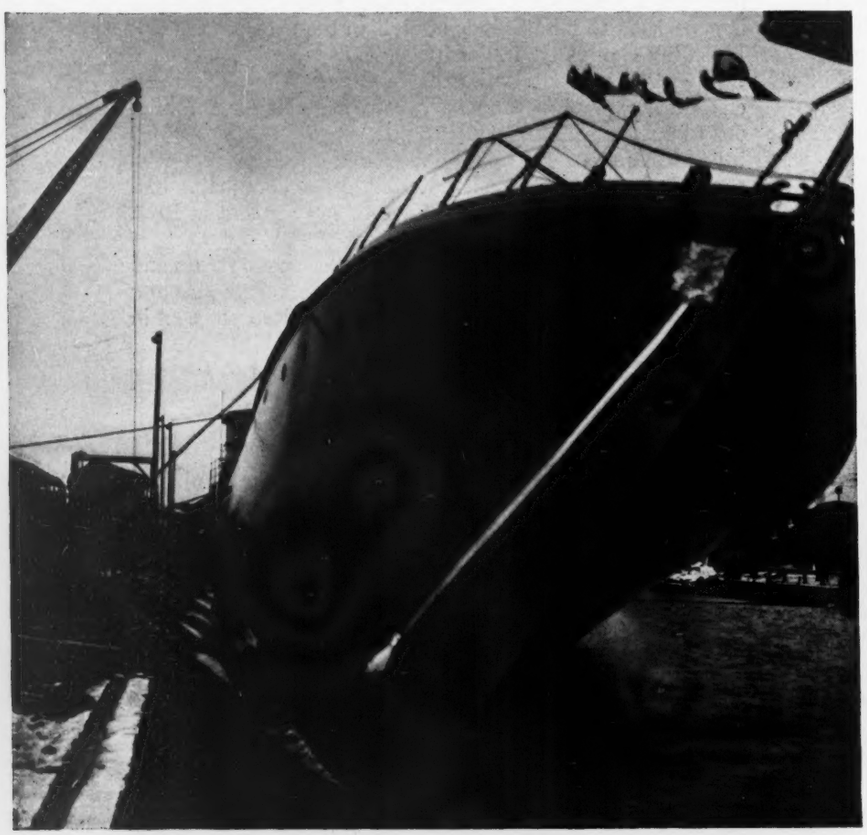
Candler-Hill Corp., Detroit, Mich.
Titan Fuel Pumps. Production increased 100 per cent in 1942.

Casein Company of America, New York, N. Y.
Cascamite powdered Urea-Resin glue, Casco-Resin Liquid Urea-Resin glue and Casco Powdered Casein glue.

Chemical Products Corporation, Rumford, R. I.
Marine paints.

The Crescent Company, Pawtucket, R. I.
Insulated wire and cable. Production increased 59 per cent in 1942.

Croft Steel Products, Inc. New York, N. Y.
Control room ventilators, airports, fixed lights, towing bitts, ladders, escape scuttles, hose racks, airscoops, blackout ventilators. Production increased 500 per cent in 1942.



R. S. Danforth, Berkeley, Cal.
Danforth anchors. Production increased 1000 per cent in 1942.

Davis Emergency Equipment Co., Newark, N. J.
Gas masks, hose masks, combustible gas indicators, combustible gas alarms, safety belts, fireproofing compound.

Durez Plastics and Chemicals, Inc., North Tonawanda, N. Y.
Molding materials, plastics, resins and oil soluble resins.

Durkee Marine Products Corp., Staten Island, N.Y.
Navigating lights, accommodation lamps, mechanical telegraphs, steering gear, portlights, marine windows, deck lights and bronze life line turnbuckles. Production increased 1200 per cent in 1942.

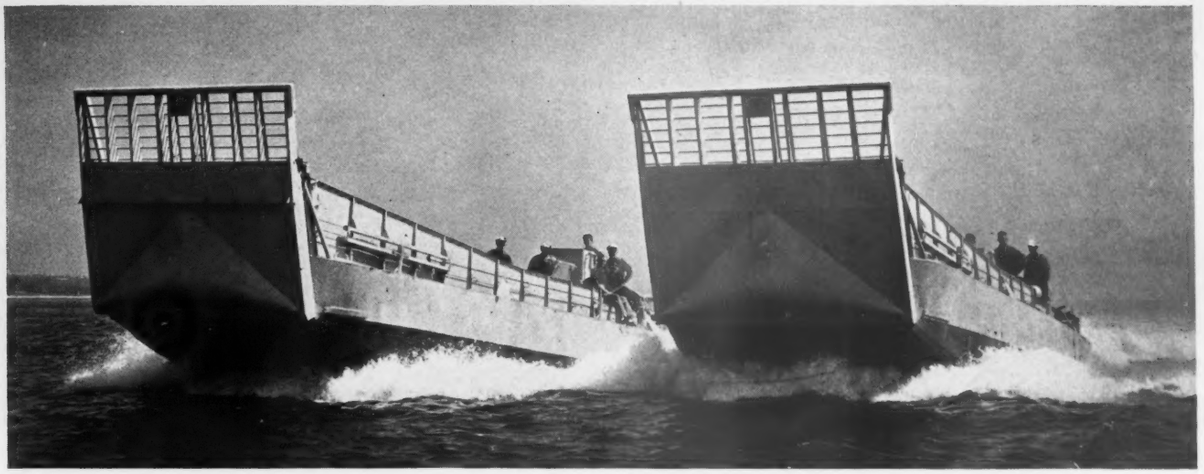
Edward Smith & Co., Inc., New York, N. Y.
Marine paints and varnishes. Production increased 12 per cent in 1942.

Engineering Sales Co., Sheboygan, Wis.
Parallel rules and dividers. Production increased 500 per cent in 1942.

Darling Equipment Co., Grand Rapids, Mich.
"Rex" anchor windlass.

American Brass Co., New York, N. Y.
Everdur Bronze fittings.

Champion Spark Plug Co., Toledo, Ohio.
Spark plugs for marine gasoline engines.



For far-off beach head landings. The Greenport Basin and Construction Company's mass production methods enable it to turn out tank lighters such as these in ever increasing quantities

Columbian Bronze Corp., Freeport, L. I.
Propellers for all types of Navy, Army and Coast Guard craft.

Electric Storage Battery Co., Philadelphia, Penn.
Storage batteries for all types Army, Navy small craft.

Jefferson Travis Radio Mfg. Co., New York, N. Y.
Communication equipment such as "Walkie-Talkie" for armed forces, and ship-to-shore telephones.

Paragon Gear Works, Taunton, Mass.
Reverse gears for marine engines.

Webster Brinkley Co., Seattle, Wash.
Steering mechanism and deck machinery.

Wilcox, Crittenden & Co., Middletown, Conn.
Hardware and fittings.

Delco Appliance (Division of General Motors Corp.), Rochester, N. Y.
Starting and lighting equipment, ignition systems, batteries, etc. for marine engines.

Michigan Wheel Co., Grand Rapids, Mich.
Propellers for Coast Guard cutters, landing boats, other classes.

H. M. Harper Co., Chicago, Ill.
Fastenings for all classes of boats and ships.

Frederick J. Valentine, Inc., Ridgewood, N. Y.
Complete rudders and strut assemblies, ventilating systems, other metal equipment on sub-chasers and mine sweepers.

Ideal Windlass Co., South Attleboro, Mass.
Anchor windlasses on sub-chasers and mine sweepers.

F. S. McLachlan Co., Inc., New York, N. Y.
Exhaust silencing systems on sub-chasers.

Manhattan Marine & Electric Co., New York, N. Y.
Exhaust blowers, Aldis type signal lamps.

Bausch & Lomb Optical Co., Rochester, N. Y.
Binoculars for Navy and Army.

L. W. Ferdinand & Co., Boston, Mass.
Marine Glues.

American Engineering Co., Philadelphia, Penn.
Anchor windlasses on sub-chasers and mine sweepers

Carlisle & Finch Co., Cincinnati, Ohio.
Searchlights on all types of Army and Navy craft.

Voss Ice Mchine Co., New York, N. Y.
Propeller shafts and rudders for mine sweepers and sub-chasers.

Trade Wind Motorfans, Inc., Los Angles, Cal.
Ventilating systems, blowers, for sub-chasers and other Navy small craft.

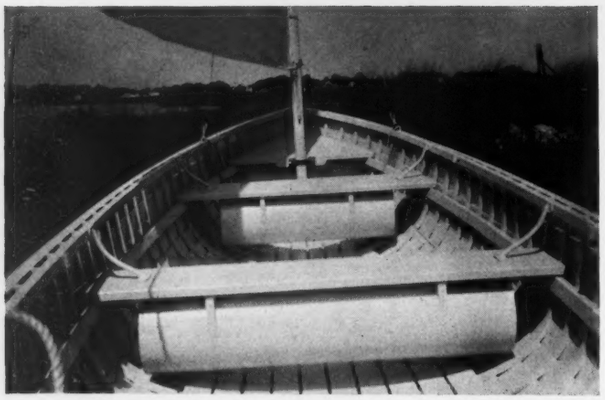
Goulds Pumps, Inc., Seneca Falls, N. Y.
Pumps for all marine services. Production increased 300 per cent in 1942.

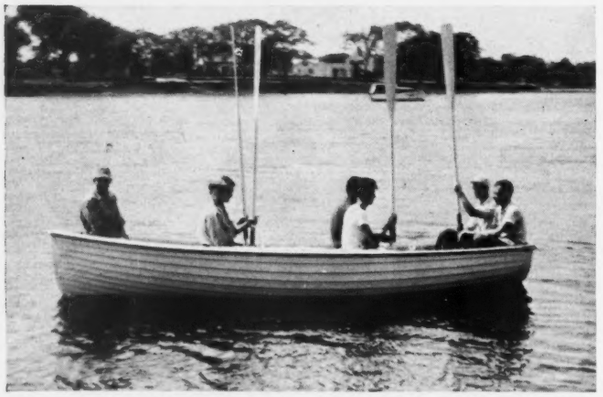
Haskelite Manufacturing Corp., Chicago, Ill.
Haskelite Plywood and Plymold for all types of war craft.
Production increased 50 per cent in 1942.

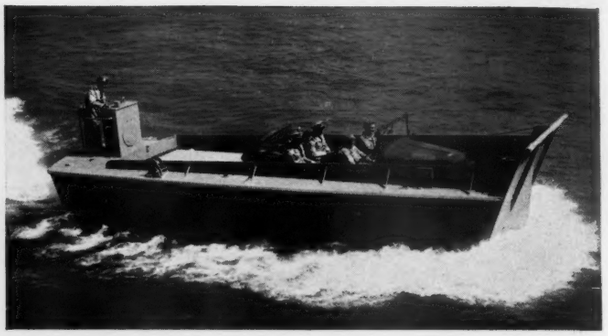
International Paint Co., New York, N. Y.
Paints and accessories. Production increased 100 per cent in 1942.

Kelvin & Wilfred O. White Co., Boston, Mass.
All types of nautical instruments.

This Higgins PT means business, and is capable of successful combat with a vessel six times her size







The Hallicrafters Co., Chicago, Ill.
Radio communication equipment.

Kenyon Instrument Co., Huntington Station, L. I., N. Y.
Kenyon marine speedometer, Newell type pilot-static marine speedometer, Kenyon-Bruehl protractor, Kenyon calculator, Kenyon speedometer-log, Kenyon weathercaster.

The Kilborn Sauer Co., Fairfield, Conn.
Searchlights, foghorns (non-automatic), boathooks, cabin lights, running lights. Production increased 50 per cent in 1942.

I. F. Laucks, Inc., Seattle, Washington.
Lauxite Resin Glue, Lauxein Casein Glue, Laucks wood preservatives. Production increased 100 per cent in 1942.

Littlefuse, Inc., Chicago, Ill.
Fuses, fuse mountings, anti-vibration fuses. Production increased 150 per cent in 1942.

Lord & Burnham Co., Irvington, N. Y.
Windshield wipers, ship's gearing, assault boats, treadways and footbridges. Production increased 100 per cent in 1942.

Lyon Metal Products, Inc., Aurora, Illinois.
All types of prefabricated parts and ship furniture.

Merriman Bros., Inc., Jamaica Plain, Mass.
Blocks, mast fittings, rigging, steering gear, cleats and chocks, stanchions, davits, megaphones, turnbuckles. Production increased 200 per cent in 1942.

Metallic Coatings Corp., New York, N. Y.
Coperoyd marine bottom coating. Production increased 90 per cent in 1942.

Modine Manufacturing Co., Racine, Wis.
Ventilation heaters, convector radiators, unit heaters, cabinet unit heaters.

D. W. Onan & Sons, Minneapolis, Minn.
Electric plants. Production increased 500 per cent in 1942.

Owens-Corning Fiberglas Corp., Toledo, Ohio.
Fiberglas marine insulations, Fiberglas lagging tape, Fiberglas electrical insulation.

Perkins Marine Lamp & Hardware Corp., Brooklyn, N. Y.
Navigation lights, signal lights, searchlights, pumps, toilets, binnacles, general marine hardware.

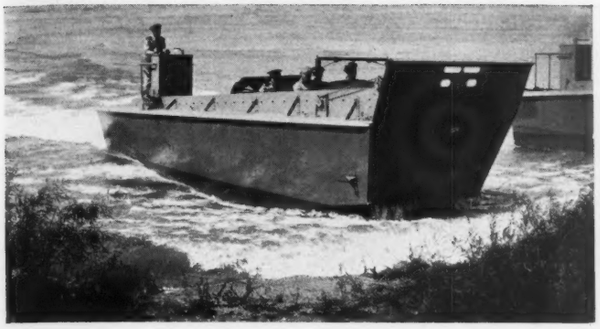
Pierce Plastics, Inc., Bay City, Mich.
Permalon plastic screen cloth.

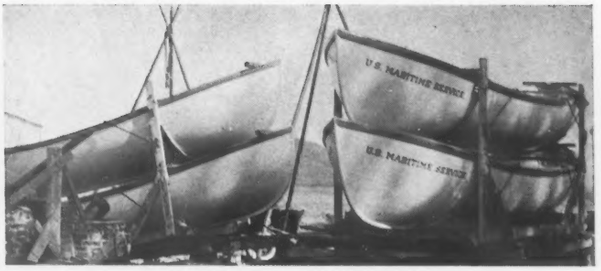
Pump Engineering Service Corp. (Pesco Division of Borg-Warner Corp.), Cleveland, Ohio.
Pesco fuel pumps.

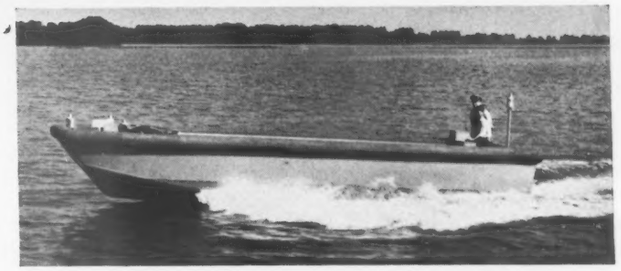
Quaker City Iron Works, Philadelphia, Pa.
Gasoline, fuel oil, water and oil storage tanks.

Revere Copper & Brass Inc., New York, N. Y.
Shafting, welding rods, seamless tubes, condenser tubes.

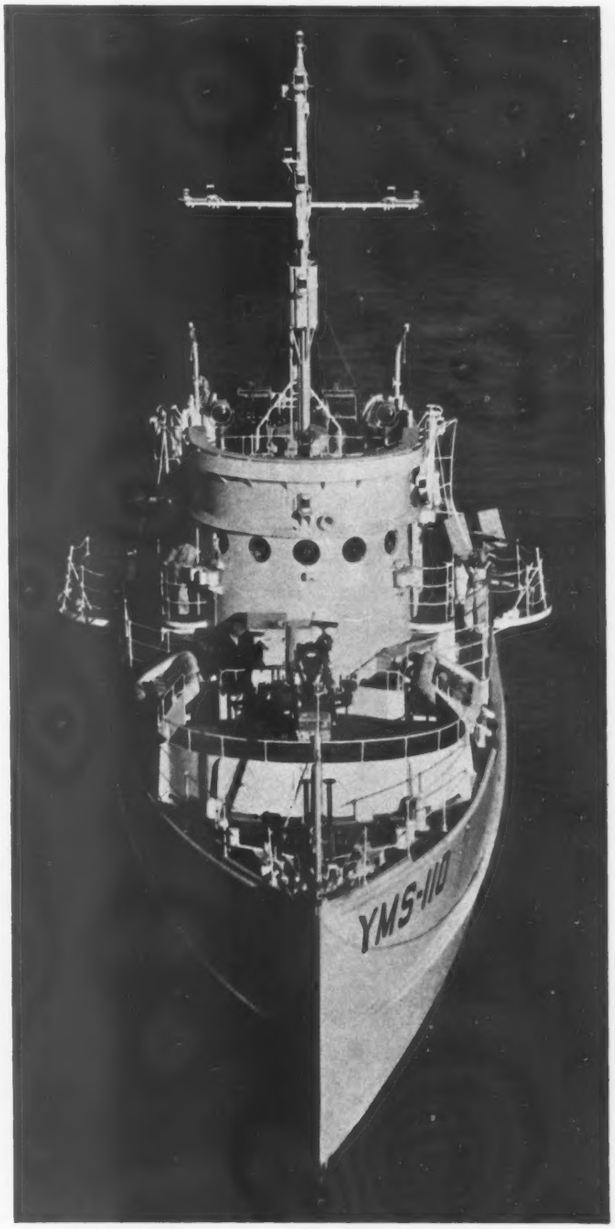
Top right, note the retraction gear fitted on the starboard deck of this vehicle landing barge built by Chris-Craft. Top left, The Anchorage is turning out countless numbers of these 16′ sailing wherries for war-craft use. Bottom, a Eureka landing boat constructed by Matthews and a plane rearmament boat by Dunphy make their trial runs







The Snow-Nabstedt Gear Corp., New Haven, Conn.
Joe's reverse and reduction gears, one-way clutches, flange couplings.
The Sparks Withington Co., Jackson, Mich.
Warning signals. Production increased 60 per cent in 1942.
Stamford Foundry Company, Stamford, Conn.
Shipmate galley ranges. Production increased 250 per cent in 1942.
Stay Tite Products Co., Cleveland, Ohio.
Caulking compounds. Waterproof glue, sealers, wood crack filler.
Templeton, Kenly & Co., Chicago, Ill.
Util-a-tool, steamboat ratchet jacks.
Trageser Copper Works, Inc., Maspeth, N. Y.
Tanks for oil and water. Production increased 100 per cent in 1942.
Transmitter Equipment Mfg. Co., Inc., New York, N. Y.
Radio communication equipment.
Tripp Manufacturing Co., Chicago, Ill.
Marine searchlights. Production increased 100 per cent in 1942.
Twin Disc Clutch Co., Racine, Wis.
Marine reverse and reduction gear units. Production increased 700 per cent in 1942.
United States Plywood Corporation, New York, N. Y.
Waterproof marine Weldwood, Weldwood waterproof glue.
Joseph Van Blerck & Son, Roosevelt, N. Y.
Exhaust manifolds and pipes. Production increased 100 per cent in 1942.
Ward Leonard Electric Co., Mount Vernon, N. Y.
Relays, rheostats, resistors, motor controls.
Washington Stove Works, Everett, Wash.
Alaska and Neptune heavy duty ranges. Production increased over 100 per cent in 1942.
The Weatherhead Company, Cleveland, Ohio.
Choke controls, tube fittings, shutoff cocks, packless valves, flexible fuel and oil lines.
Willard Storage Battery Co., Cleveland, Ohio.
Various types of batteries.
Wilkening Manufacturing Co., Philadelphia, Pa.
Piston rings. Production increased 20 per cent in 1942.
Aridye Corporation, Fair Lawn, N. J.
Canvas paint and preservatives.
Cluff Fabrics Products, New York, N. Y.
Life preservers, boat fenders, ring buoys, canvas covers. Production increased 600 per cent in 1942.
Dodge Cork Co., Lancaster, Pa.
Life preservers, ring buoys, boat fenders, cork gaskets.



Top left, the one thing that landing boats don't need is a coastal pilot. Top right, Henry Hinckley is producing large numbers of these U. S. Maritime Commission lifeboats. Center, plane rearmament boats are faster than they look. Lyman Boat Works is building many such craft. This Burger YMS is an excellent example of small warcraft design

Rosenfeld Photos

Study these two pictures and one need not inquire as to what contribution the boat building industry is making to the war effort. In the center, above, is the yard of Robert Jacob in the days when yachtsmen went to sea for pleasure. A section of the same yard, one year later, is shown below

Douglas Fir Plywood Association, Tacoma, Wash.
Fir plywood for almost innumerable types of marine construction.

M and M Wood Working Co., Portland, Oregon.
Resnprest exterior plywood for boat hulls. Production increased 200 per cent in 1942.

The McKay Company, York, Pa.
Arc welding electrodes.

American-La France-Foamite Corporation, Elmira, N. Y.
Fire apparatus and fire fighting equipment.

Western Electric Company, New York.
Communications equipment.

Walter Kidde & Company, Inc., New York City.
Fire protection equipment.

Durez Plastics & Chemicals Inc., North Tonawanda, New York.
Marine motor housings and other plastics for marine uses.

Atlantic-Pacific Manufacturing Corp., Brooklyn, N. Y.
All types of marine life saving equipment.

Federal-Mogul Marine, Detroit, Michigan.
Propellers, rudders, struts, propeller shafts, shaft logs, stuffing boxes, lifting rings and brackets, skegs and similar parts. Production increased 1000 per cent in 1942.

Winner Manufacturing Company, Trenton, N. J.
Life rafts, buoyant apparatus, seadrome landing lights and buoys, life floats, pyrojectors, submarine escape buoys, dan buoys and other life saving equipment.

F. E. Myers & Brothers Co., Ashland, Ohio.
Marine bilge pumps.

The performance record which the manufacturers of marine equipment have been able to achieve is another outstanding example of the capacity to produce which has been manifested during the past twelve months by the entire marine industry.

Equipping America's first line of defense is a vast and complex task, but its speedy successful execution is a major contribution both to tomorrow's peace and to yatching's future.

Hubbard South Coast Co.

The task of the mine sweeper is arduous, and their officers are often directed to sweep channels in which they have cruised or raced

THE DEALER LOOKS TO THE FUTURE

Having Weathered a Difficult Year, Both the Dealer and the Yachtsman Have Learned to Make a Little Go a Long Way

ALTHOUGH retail marine supply dealers have successfully weathered a difficult year, there can be little question but that the coming twelve months present even greater problems of both supply and demand. Wholesalers have also had their difficulties in endeavoring to fill priority orders, because of the fact that even the greatly accelerated production on the part of manufacturers has at times, circumstantially, fallen behind rapidly mounting government orders.

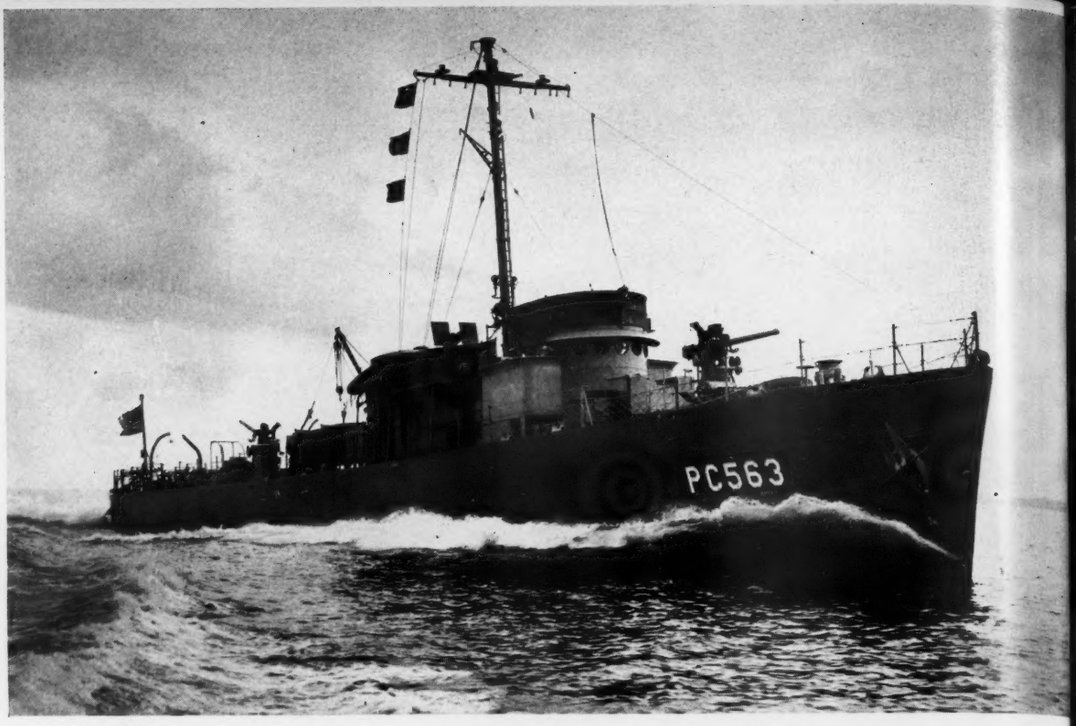
At this date, it is impossible to forecast accurately the amount of yachting that may be expected in 1943, and it is even more difficult to hazard a guess as to what supplies will be available for America's vast pleasure boat fleet.

In the course of a survey recently completed by YACHTING, retail marine equipment dealers throughout the country checked the various types of equipment and supplies they had on hand and, on the basis of their analysis, gave their own estimate of not only what material they might obtain during the coming year, but what they thought the demand for it would probably be.

The following digest of their findings reveals some interesting (and encouraging) figures: 95 per cent of the dealers questioned have adequate supplies of brushes, 93 per cent putty and compositions, 81 per cent oars and paddles, 80 per cent paints, 60 per cent anchors, 60 per cent miscellaneous gear, 56 per cent canvas articles, 56 per cent general marine hardware, 56 per cent cushions and 50 per cent lighting equipment.

There is little question but that outboard motors will be the principal shortage next year, as nearly 84 per cent of the dealers questioned report they have no stock and anticipate no chance of getting any. The inboard motor situation is almost the same, for 82 per cent of the dealers report depleted inventories. Interestingly enough, the next greatest shortage is that of stoves, with some 76 per cent of the dealers reporting both cooking and heating units among the missing. Marine plumbing is next on the shortage list, with 73 per cent of the dealers reporting little or no stock. Some 72 per cent stated they were practically cleaned out of electrical appliances, and it is safe to assume that this figure will rise appreciably in the next six months. Whereas there will certainly be shortages in rope, rigging and fittings, there is definite indication of more stock on hand than was believed. Only half of the dealers questioned indicated that their stock is low on these three essential items.

Marine dealers have long known the advisability of being conservative and, come the new year, there has always been much shaking of heads over the probable state of business in the season to come. Hence, the admitted feeling that the out-



Top, Consolidated's long record of fine yacht construction is being continued in the building of sub-chasers such as PC 563. Center, plywood pontoon boats are used for many purposes. Here they form a bridge for troops and vehicles. Bottom, the demountable shelter on this mine yawl built by Henry R. Hinckley offers an idea for pleasure boat adaptation after the war

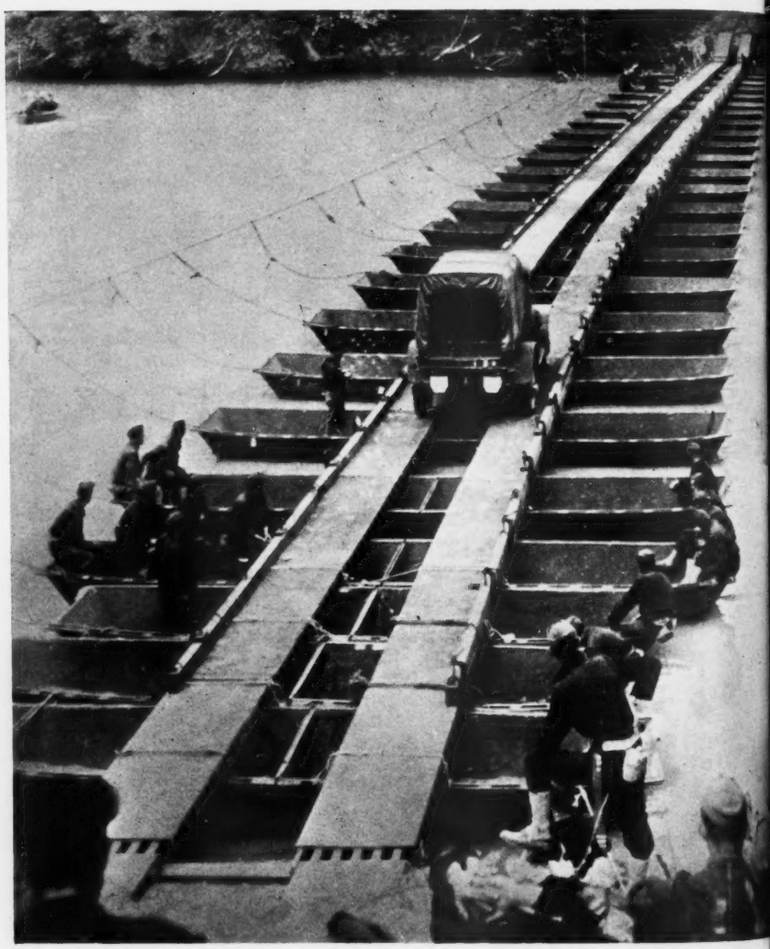
look for 1943 is, perhaps, even darker than in years previous is not unexpected. They have been quick to state that changes in gas regulations, as they apply to pleasure boats, will change the picture materially.

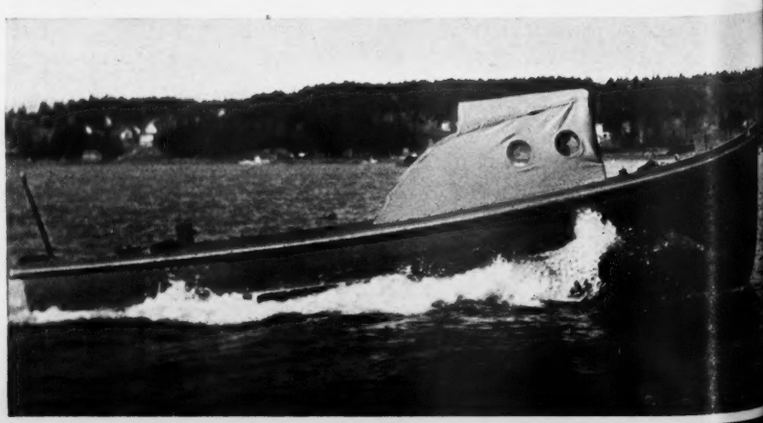
The trade is also ready to acknowledge that the large and growing fleet of Coast Guard Auxiliary vessels may well be one of the principal sources of business for the duration of the war. The government has stated that C.G.A. boats must be kept in operation and, since many of them have been in service almost continuously since the outbreak of the war, there is little doubt but that they will need servicing and re-equipping during the coming year. Coast Guard Auxiliary officials have stated that priorities for necessary parts and equipment will be obtained whenever the need is urgent. In such cases (and there will undoubtedly be many), the dealer will have an opportunity to secure material on the same basis as that of a government contract.

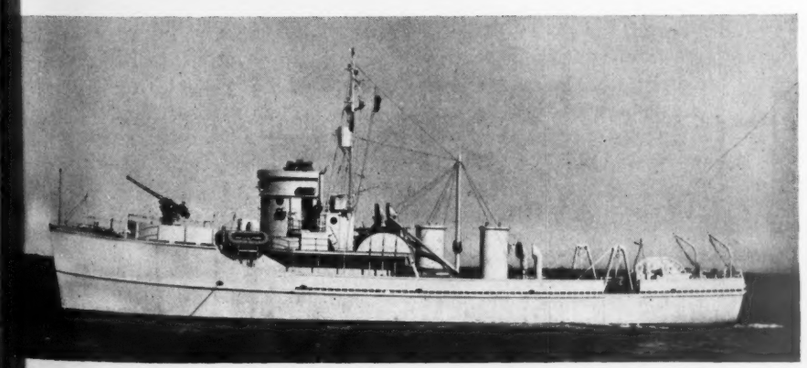
A significant sign of the times is the forecast given by those dealers who are located in manufacturing areas devoted to war industries. Here the marine supply firms expect a part of the greatly expanded payroll of such districts to be spent on recreational activities (which they naturally expect to include boating), but also do they feel that many war workers will take up boating for the first time. In such instances, it is the small boat (and particularly the small sail boat) which is expected to be much in evidence and in great demand. The repeated reference to small boats which was found in all of the questionnaires received is, in the opinion of the editors of YACHTING, indicative of the small boat trend which was developing prior to the war and which will spurt forward as soon as hostilities have ceased. Whereas such small craft will be increasingly limited to sail for the duration, because of the gasoline shortage, it is self-evident that the small, motor driven vessel will share equally in this popularity when gas is again plentiful. An interesting observation is that most of the dealers feel that they have enough supplies to service these small sailing craft during the coming season, and they also express the opinion that their general condition is probably such that there is no problem of keeping them in good condition for the duration.

Many dealers, located in resort centers and on inland waterways, state that increasing numbers of children have taken to the water during the past summer. They believe that this trend will continue.

The great majority of the gasoline dealers who replied reported that they have every intention of keeping their







stations, docks or barges open, but made it quite clear that they have no idea as to exactly what quantities of fuel they may have for pleasure boat use.

It remains, then, that any forecast of pleasure boat operation in 1943 hinges principally on three basic considerations. First, the number of persons available to use such boats. Second, the restrictions on pleasure boat operation imposed by the government. Third, the amount of gasoline allotted to each boat in any one period.

It is apparent that, as time goes on, increasing numbers of men between the ages of 18 and 38 will be joining the Services, and that this factor will reduce substantially the number of yachtsmen who would use their boats if they were in a position to do so.

The Port Security Officer of the United States Coast Guard has an encouraging word to say about the government's attitude toward the use of pleasure boats in 1943.

"What new Coast Guard security rules and regulations will Captains of the Port be called upon to enforce, and what will be their restrictive effect on the use of my pleasure craft during the coming season? Will I be able to use my craft for fishing after dark? Will all my guests be required to have Coast Guard identification cards? What are some of the general restrictive areas now prescribed for the area in which I am accustomed to cruise? These are typical of the questions now being asked among yachtsmen. Viewing this matter generally, it is safe to predict that the 1943 Coast Guard requirements for pleasure vessels will be more comprehensive than in preceding years.

"Proposed regulations, soon to become effective, will eliminate all pleasure craft from the blanket authority contained in General License No. 1 (33 U.S.C. Part 6; Section 6.200). This will mean that, unless exempted by the Captain of the Port, every yacht operating within local (inland) waters of the United States or its territories, will be required to carry an individual movement license (Form 2686).* There is, of course, no provision for this class of vessels to operate in open sea, except where its services are employed under the supervision and control of the Captain of the Port and the Commandant of the Naval District in which the vessel is to be operated.

"This license has already been issued to many yacht owners. It defines the area in which the vessel may operate, and sets forth the terms and conditions that must be complied with.

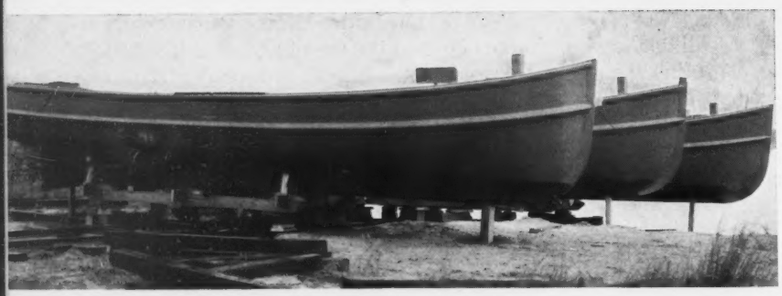
"If the movement license is not required by the Captain of the Port in whose jurisdiction your yacht is located, and your cruising radius is confined to this area, it is urged that written permission be obtained from the owners or persons in charge of all piers, wharves or waterfront facilities which you may have occasion to visit either socially or for business reasons during the coming year.

"If you operate exclusively in the Great Lakes, consult your chart as to the location of the International Boundary. Cruising from the American side to the Canadian side re-

**This is the same form issued to coastal yachtsmen in 1942.* ED.

Top, camouflage will greatly reduce the visibility of YMS 57, built by Gibbs Gas Engine Company, when at sea. Top center, all of the sleekness which characterizes Gar Wood's pleasure craft is found in this trim picket boat. Bottom center, the YMS sweepers are rugged and seaworthy. Bottom, there are only 150 pounds of steel in this 31-person plywood lifeboat of a type which Gunderson Bros. have been turning out on a mass production basis

Top, the Vosper type PT, long employed by the Royal Navy, has achieved a notable performance record. Annapolis Yacht Yard is building a number of these craft under a Lease-Lend contract. (Rosenfeld Photo) Top center, 40' Navy launches for Army use under construction at the Cape Cod Shipbuilding Company. Bottom center, both aircraft rescue boat and landing barge are by Owens. Bottom, the last word in a YMS is the one by Burger which reveals a complex assemblage of deck gear



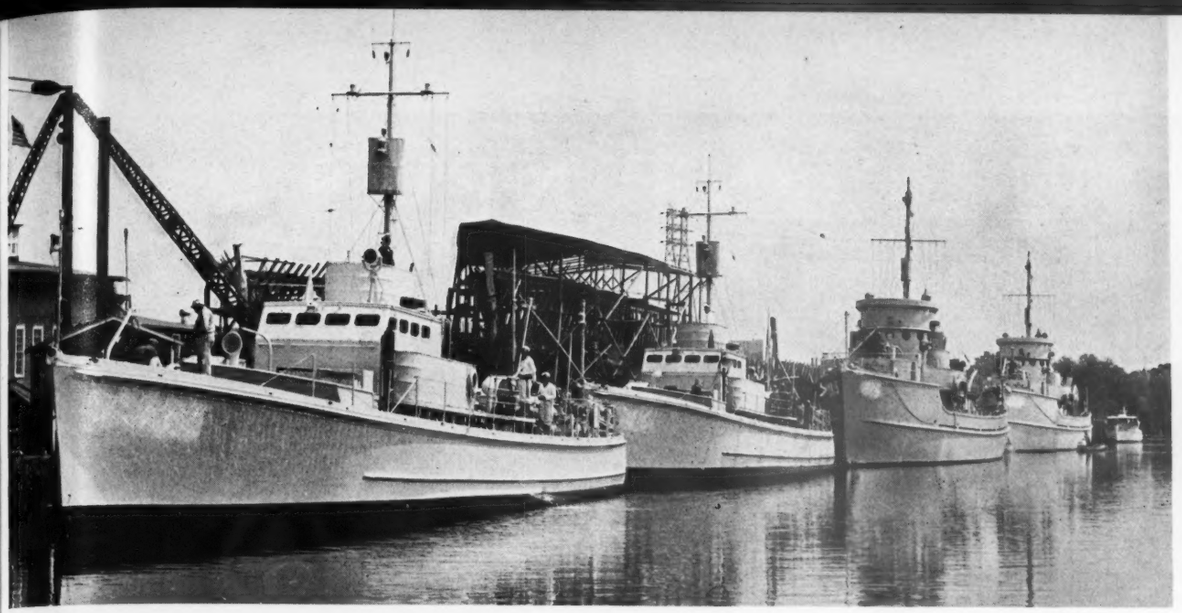
quires a departure license. This is similar in form to the ordinary movement license (Form 2686) and is obtainable only from the Captain of the Port.

"The yachtsman may expect a thorough inspection by the Coast Guard and, unless the vessel conforms with certain established security standards, the issuance of the movement license will be withheld. In jurisdictions where this license is in general use, compliance with such standards may be a condition precedent to moving the vessel from her mooring. In addition to the normal requirements as to fire extinguishing equipment, flame arresters, drip pans, lights, life preservers, etc., close inspection will be made with regard to the cruising radius, water supply, signal equipment such as blinkers, whether or not all radios on board are sealed, and other unusual or suspicious equipment. The owner's special authority from the Captain of the Port to carry firearms and cameras will, of course, be carefully checked by Coast Guard boarding parties. If your vessel has not been in commission subsequent to July 1st, 1942, it will be necessary to purchase and plainly exhibit the Federal Use Stamp.

"Yachtsmen in general will be prohibited from operating between the hours of sunset and sunrise. Cruising after dark, however, may be permitted in some of the outlying areas which are far removed from commercial traffic and important waterfront facilities. Become thoroughly familiar with all restrictions of this nature. Do not overstay your time while fishing so that darkness overtakes you in returning. Infractions such as these will be noted on your movement licenses and will, more than likely, entail a trip to the Captain of the Port's office for purpose of explaining matters.

"If you expect to have the same guest or guests on board for repeated cruises you plan during the coming year, it would be well to advise them to go to the Captain of the Port's office and obtain an identification card. This card does not serve as a pass to go aboard other vessels or upon shore establishments, but is merely a means of identification. It is and should be accepted as information as to who you are, and carries with it no authority corresponding to that exercised by persons who are employed on vessels or waterfront property. If you are a guest, your presence on board is with the consent and invitation of the owner; he, in a measure, is responsible to the Captain of the Port for your activities. You are not on board by virtue of any authority emanating from the Coast Guard identification card. If the Captain of the Port has not as yet required you to have a Coast Guard identification card, it is imperative that you be prepared at all times, while on board, to have satisfactory means of identification on your person.

"The question may be asked whether it would be in accordance with existing laws to have on board an Italian



Left, the fitting out basin at the Dachel-Carter yard seems far removed from a world at war. Below, an aircraft rescue boat by the Saybrook Yacht Yard. Center, small cargo boats are now being employed by the Army in increasing quantities. The Sturgeon Bay Boat Works is the builder of T 10. Bottom, molded of Weldwood, Penn Yann's small Army boats give more than a suggestion of a trend in post-war construction

alien. The answer to this is that on October 27th, 1942, the President approved a regulation, the effect of which was to remove Italian aliens from the class of enemy aliens, and for the purpose of going aboard they will have the same status as any other alien of allied nationality."

At the present time, the gasoline situation seems to be that a maximum of 500 gallons will be allowed each boat with inboard motor for the entire year, and 80 gallons for outboards. The periods in which gas may be consumed are divided into four parts of three months each. Yachtsmen whose boats are laid up for the winter months will be unable to obtain such a maximum, for the gasoline received for a designated three-month period must be consumed within that time.

John R. Richards, Chief of the Gasoline Rationing Branch of the Office of Price Administration, has issued the following official ruling regarding pleasure boat gasoline allowances.

"The Office of Price Administration realizes the enormous value of private boats in coastal defense. Since we have 44,000 miles of coastline and hardly enough boats in the entire country to provide adequate coastal patrol, it is essential that all boats be placed in commission ready for immediate operation in any service that may be required in the war effort.

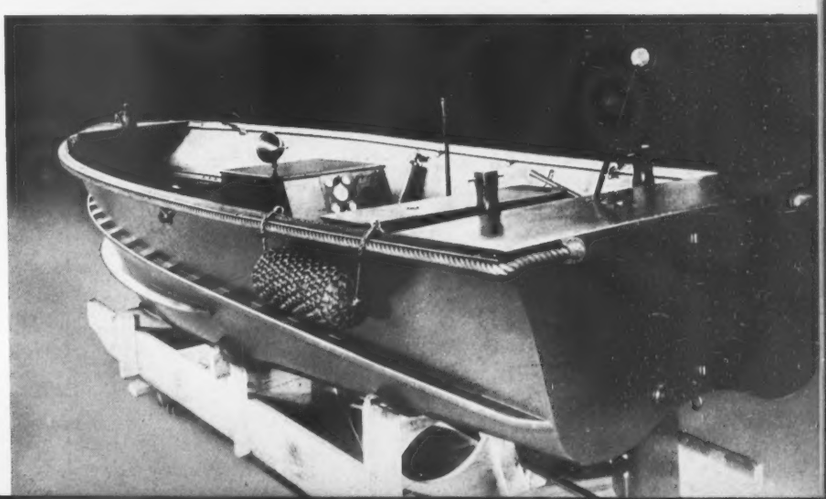
Types of Coupons

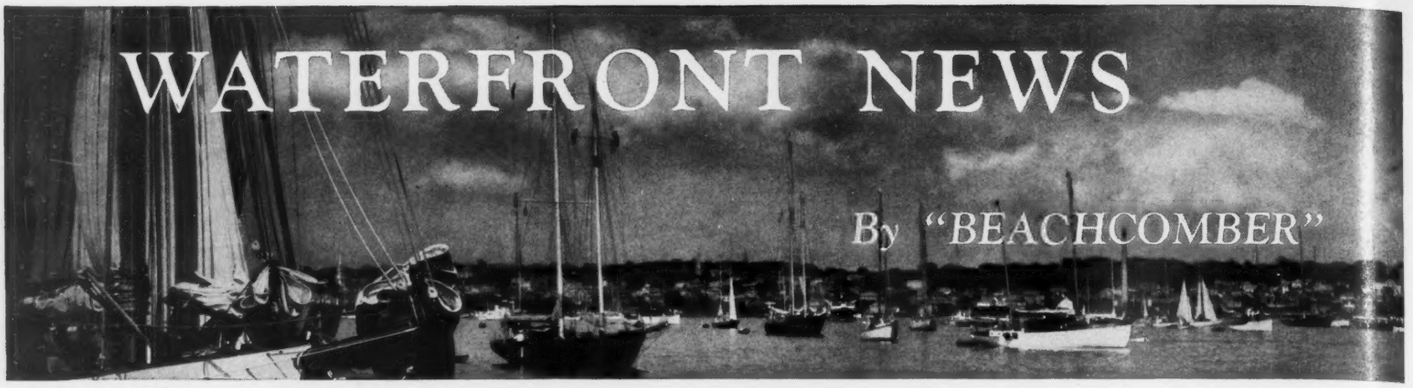
"Under the nation-wide Mileage Rationing Program, Class "E" and Class "R" coupon books will be issued as Non-Highway Rations for the operation of motor boats. Coupons in Class "E" and Class "R" will each have a value of one and five gallons of gasoline, respectively, and will be valid for the transfer of gasoline to a non-highway consumer during the three-month period noted on such books by the boards.

Method of Application

"The owner of a motor boat may make application after November 12th, 1942, for a Non-Highway Ration for the gasoline necessary to operate his boat. Such applications must be made to the local War Price and Rationing Boards on Form OPA R-537. The applicant will be required to state the amount of gasoline needed for the operation of his boat during the three-month period for which the ration is needed.

(Continued on page 174)





WATERFRONT NEWS

By "BEACHCOMBER"

INSTRUCTION COURSES

THE Boxell School of Navigation, 62 Long Wharf, Boston, Mass., must be added to a recently published list of recommended navigational schools. This school has been in the business of teaching navigation and preparing qualified persons for examinations since 1937, and its courses are designed to give the student a good understanding of Chart Navigation, Piloting, Dead Reckoning, Latitude, Longitude, Azimuth, Line of Position, etc., in the shortest time possible.

Applicants for examination for commission in the Coast Guard Reserve are also coached in the various other subjects covered by the scope of the requirements furnished by that service.

The length of time needed to complete the average course depends upon the individual's aptitude. Generally speaking, 125 to 150 hours is sufficient. Students may enroll at any time, provided they signify their intention to begin the study at least three days in advance. The tuition is inclusive, all texts, material, etc., necessary to the study being furnished by the school.

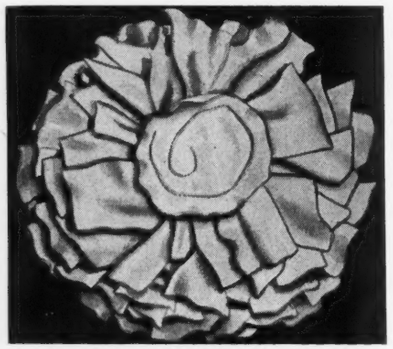
School hours are from 9:00 a.m. to 12:00 m., and from 1:00 p.m. to 5:00 p.m., Mondays through Fridays; evenings from 7:00 p.m. to 10:00 p.m., Mondays, Tuesdays, Thursdays and Fridays. There are no classes, as such, and no lectures, instruction being given on an individual basis.

There are no particular requirements as regards mathematical background. A knowledge of simple arithmetic is sufficient.

METEOROLOGY is the course of the hour, according to Harold A. Baker, of the Baker School of Navigation, Hotel Astor, N. Y., and he has therefore added instruction in this science to his school's growing list of courses.

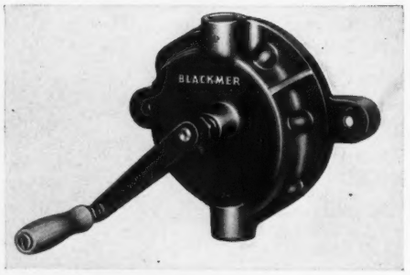
Peter E. Kraght, author of the textbook on "Meteorology," conducts the five-week, ten-session course, open to women as well as men. Morning, afternoon and evening classes now open for enrollment. All work is done in the classroom. There is no homework, excepting reading. Yachtsmen, airmen, pilots, navigators and radiomen will benefit by a knowledge of the subject; in fact, all services can use men who know meteorology.

Aerial navigation is the third course that has been added to this school's instruction list. One of the country's leading authorities on this vital subject has been secured as chief instructor. New groups are also forming in celestial navigation as well as aerial navigation and meteorology. Write to Harold Baker at his school at the Hotel Astor, N. Y., for further information.



NEW CHAMOIS SPONGE

WITH an eye to threatened wartime sponge shortages, Tamms Silica Co. has just announced the design of a new type "sponge." It is made of small pieces of No. 1 quality chamois sewed into a cluster in such a way that it holds plenty of water, without dripping. Known as "Topsy" Chami-Sponge, it can be used wet as a sponge, then wrung dry and used as a chamois. Tamms also announces the design of a Mesh Wool Sponge, made from sections of select natural wool sponges securely enclosed in a soft absorbent net. Both products are made in two sizes for professional and general use. Tamms Silica Company, 228 North LaSalle St., Chicago, Ill.



BLACKMER BILGE PUMP

FAIR weather or foul, there is no marine device that is more important than a good bilge pump, and by "good" is meant one that works — all the time. The Blackmer Pump Co., Grand Rapids, Mich., has long been known for its varied line of pumping equipment, but the model which seems just about ideal for the average small boat is the WH 404 hand pump. It is easy to install and simple to operate.

The internal design of this model is such that it automatically adjusts itself to wear and maintains a constant volumetric efficiency during the life of the "buckets" or vanes. Capacity is 20 g.p.m. at easy cranking. It is furnished in iron with bronze fittings or all bronze construction.

NYLON PAINT BRUSH BRISTLES

TO SYNTHESIZE a paint brush material with the taper, resiliency and toughness of natural bristle, has been a goal of chemists for a quarter of a century. It became a national necessity to achieve that goal quickly after Pearl Harbor, for virtually all bristles had been imported from China and Russia, and these sources of supply were suddenly shut off.

Nylon paint brush bristles, recently announced for the first time, not only have the required taper but also resiliency, toughness, length and inertness to paint ingredients. Moreover, they wear at least three times as long as natural bristles. The achievement of this tapered synthetic bristle culminates five years of research in Du Pont laboratories.

Made basically from coal, air and water, the supply of nylon is not subject to the whims of international commerce. Further, nylon is ready to be placed in a brush handle when it reaches the manufacturer. Natural bristle loses a substantial percentage of its

CHAMPION SPARK PLUGS

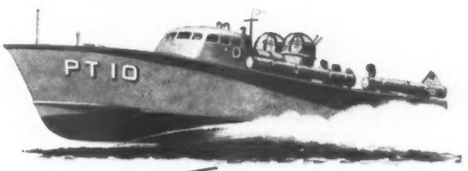
Motor boating in peace times is universally associated with pleasure, sport and commercial pursuits.

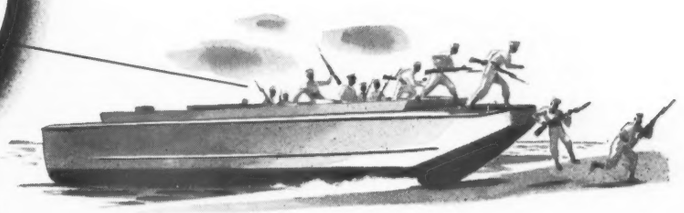
In this war to preserve those traditional rights and privileges of the American system, power boats have dramatically come to the fore as a vital part of our war effort.

Today power boats of many sizes and types are on active service day and night in widely scattered waters, discharging a wide variety of offensive and defensive duties with great efficiency.

Hard-hitting P. T. boats, rugged Coast Guard Cutters, nearly amphibious surf-landing boats, or aircraft rescue boats—these and many others are sparked by dependable Champion Spark Plugs which in their own hard-hitting, rugged and vital way are contributing to the cause of Victory.

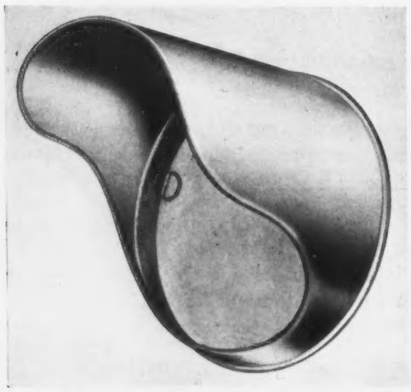
More Vital-
More Dependable
than ever!





TO SAVE GASOLINE · KEEP YOUR SPARK PLUGS CLEAN

weight before it reaches the brush. It must be disinfected by boiling, and then cleaned, trimmed and otherwise conditioned — a long, expensive procedure. Bristles of different grades, diameters, degrees of stiffness and color must be blended into the "formula" for a paint brush. This all requires time and hand labor. Nylon, produced mechanically in desired lengths and tapers, eliminates these costly preparations. There need be no fear of moths, which chew natural bristles as if they were old wool clothes. It will not deteriorate in storage, will not dry out or rot. It may be cleaned with normal paint cleaners. E. I. DuPont De Nemours and Company, Wilmington, Del.



AIRPORT SCOOPS, SCREENS AND BLACKOUT VENTILATORS

THE Croft Steel Products Co., 370 Lexington Avenue, New York, manufacturers of many types of marine equipment, has announced new models of three products:

Airscoops. Fabricated from 18 gauge galvanized steel and made in all sizes to fit all airports. Scoops are inserted from the inside and are fitted with convenient finger pulls. 18 mesh galvanized or bronze screen is permanently soldered into the scoop.

Airport Screens. Fabricated from $\frac{3}{8}$ inch by $\frac{5}{8}$ inch 18 gauge galvanized steel or brass angles, with 18 mesh galvanized or bronze screen wire. Made in all sizes to fit all airports. Screen inserts into shell frame with convenient finger pulls.

Blackout Ventilators. Latest approved type, furnishing maximum ventilation and completely obscuring light. Equipped with airscoop which rotates with the louvres in the shell for pull or push ventilation. Shell and scoop are made of 18 gauge and the louvres of 20 gauge steel. Inside handle for revolving louvres of 16 gauge steel is fitted. Completely welded construction with two or four dogbolt brackets. Complete unit is inserted into the airport shell frame from the inside. Exterior screen of 18 mesh galvanized or bronze wire is built into the unit.

EASY ELECTRIC SANDING MACHINE

THE reciprocating action of the Easy electric sanding machine, duplicates the back-and-forth motion of hand work. Speed of operation is 3000 strokes per minute as compared to approximately 150 s.p.m. by hand. Power is furnished by a heavy duty Universal electric motor of special design — in either 115 or 230 volt models. The unit weighs approximately $7\frac{1}{2}$ lbs.

To keep pace with the demand for speed, production and precision, the manufacturers of the Easy reciprocating electric sanding machine, announce their new Model XLD. A unique feature of this model is a detachable bottom plate. This is the part to which the felt, rubber, or composition sanding pad is secured, and over which the abrasive is attached.

In previous models, the pads were fixed and quick change was not possible. This new type plate permits instant removal of one type or size pad and installation of another, and will fit all models produced from 1939 to date. Detachable bottom plates are available

A bale of "Bubblfil" is so light that it can easily be held in one's arms. The material is designed as a replacement for kapok in life jackets and life rafts and for sponge rubber as a shock absorber

with pads of sponge rubber, felt or composition in widths from 1" to $3\frac{3}{4}$" and $\frac{1}{4}$" to 1" thick. Therefore, instead of attempting to use one pad for all applications, special pads are used to fit the specific job.

This feature provides for instant changeover from wet to dry work, without waiting for the pad to dry. If a wet pad is used with dry type abrasive papers, the moisture loosens the glue and destroys the abrasive. Also, in rubbing applications where frequently several grades of compound are used, a separate and often a special type felt pad is indicated for each grade compound.

For literature write the Detroit Surfacing Machine Company, 7433 W. Davison, Detroit, Michigan.

Left, this blackout ventilator furnishes ventilation yet obscures light. Above, the Easy sander duplicates the motion of handwork

Anti-aircraft crew in action aboard an aircraft carrier.

Official U. S. Navy Photograph

Two Fisted America ★ ★ ★

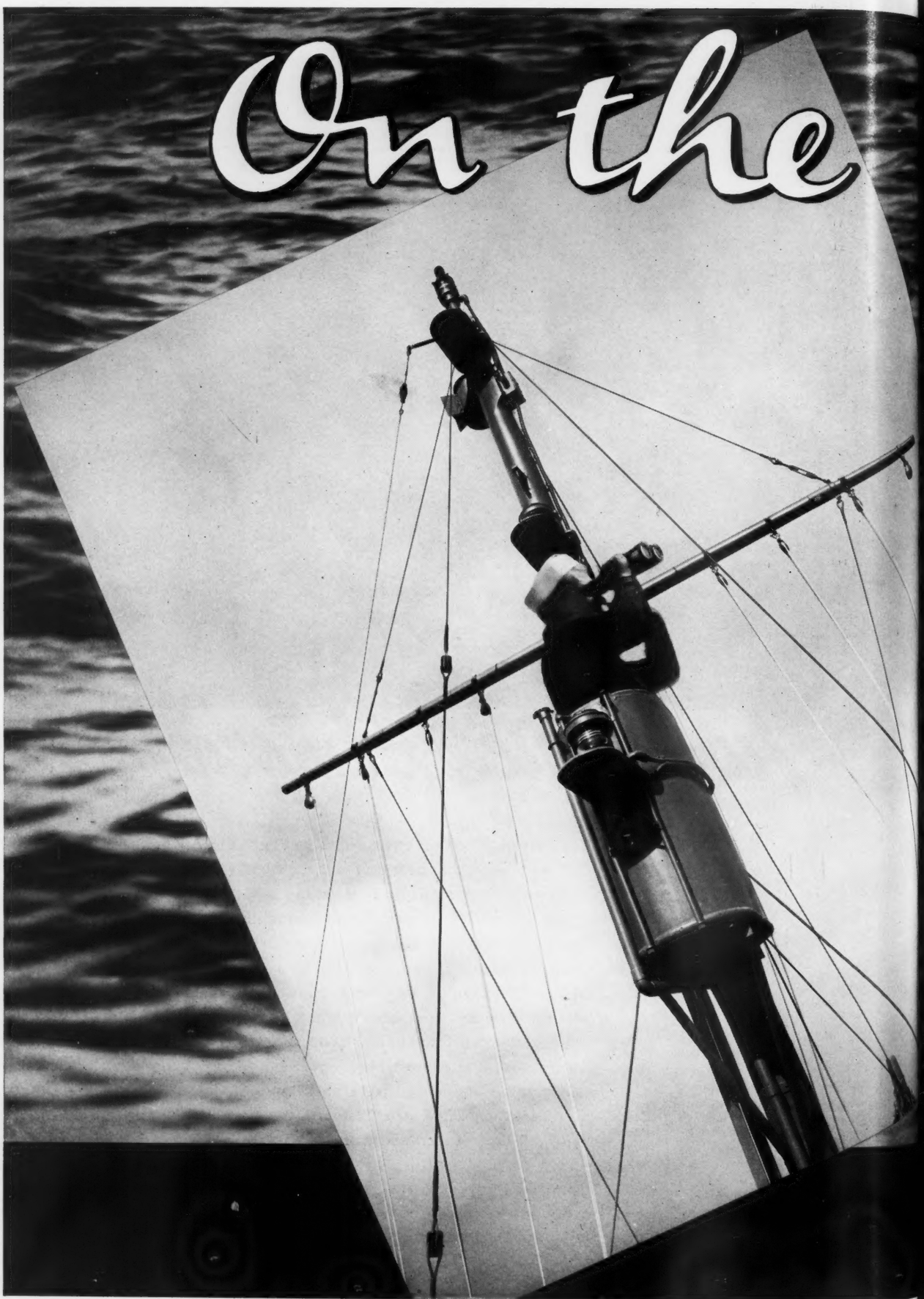
The words "I Am an American" would be shallow, indeed, unless supported by two-fisted action here on the home front! Along the world's battle lines, the Japs and the Nazis have reason to know that America is a powerful two-fisted nation. Our forces will continue to hit them again and again until the inevitable knockout. But, just as America is in there slugging, so every individual American citizen has got to be two-fisted—whether in or out of uniform. On the fighting front, hundreds of thousands of Americans face the supreme sacrifice. And at home, too, in the factories and plants that have turned full force to war production, American workmen have got to sacrifice till it hurts—working harder and harder, doing with less and less, buying more and more UNITED STATES WAR BONDS! . . . That is the goal toward which all Wilcox-Crittenden employees are striving, side by side with millions of men and women throughout this two-fisted land of ours.

★ ★ ★ ★ **Wilcox, Crittenden & Co., Inc.**

Manufacturers of "Dependable" Marine Hardware Since 1847

10 South Main Street

MIDDLETOWN, CONNECTICUT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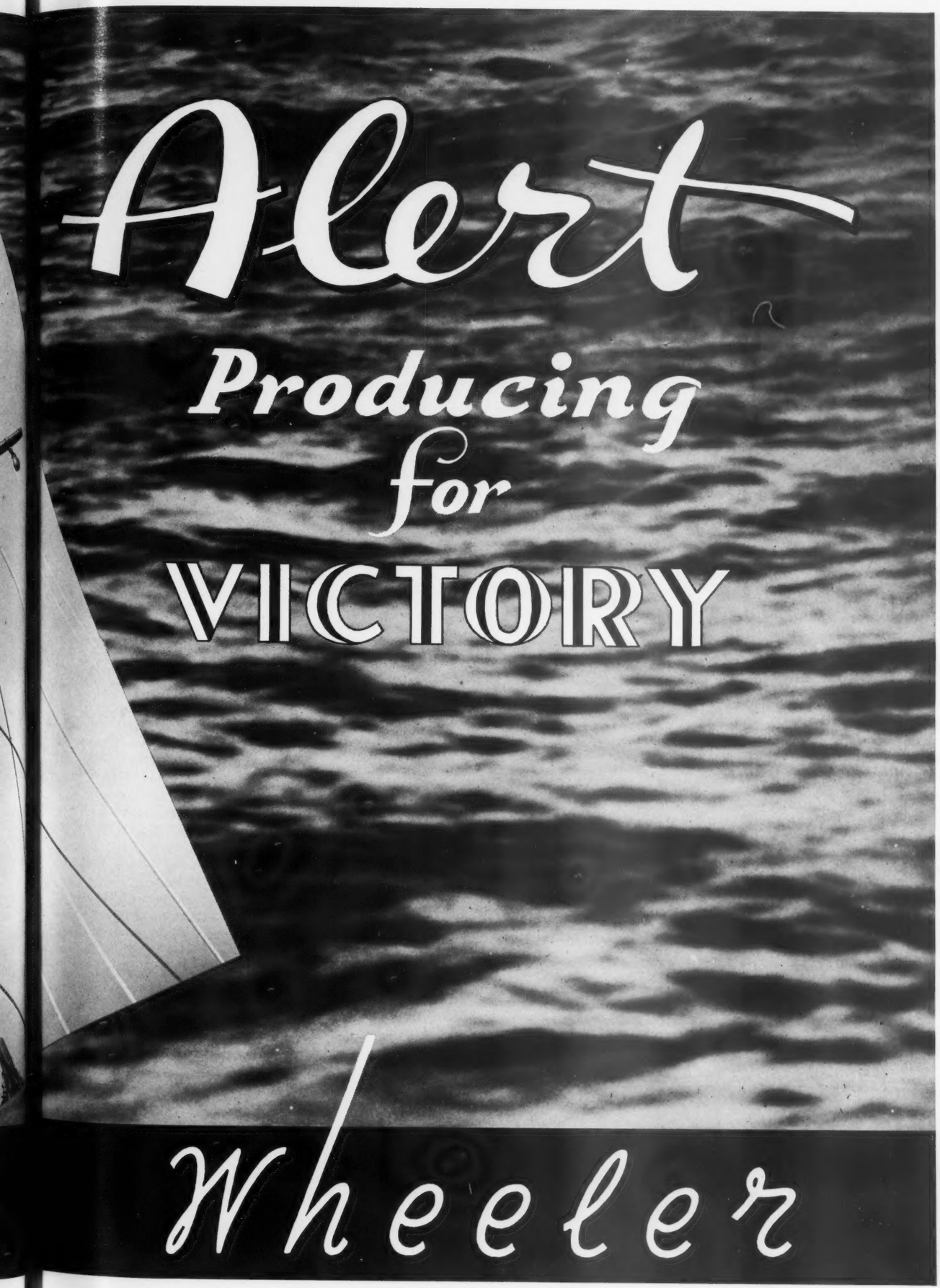
Alert
Producing
for
VICTORY
Wheeler

Contractors for

NAVIGATIONAL EQUIPMENT

meeting the requirements of the

ARMY, NAVY MARITIME COMMISSION

Manufacturers of

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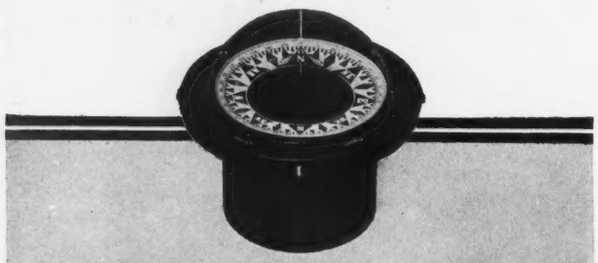

KELVIN & WILFRID O. WHITE CO.

90 STATE STREET · BOSTON
38 WATER STREET · NEW YORK

VIVA DINGHY SAILING!

(Continued from page 25)

In 1936, Bill Dyer introduced a 10-foot dink of the utility type, designed by Phil Rhodes, with a simplified yet efficient lug rig, primarily for use as a yacht tender. This craft proved quite fast for her size, seaworthy, and a fine yacht tender. The class caught on quickly in various localities and now numbers close to 500 boats. The racing in this class is frequently as closely-contested as in the B or X Classes.

Along about 1933 or 1934, Dyer, in an effort to find a dink which could be produced and sold for less money than the expensive-to-build lapstrake craft, had Phil Rhodes design an arc-bottom, flat-sided craft of the regular 11 foot, 6 inch length, and average beam and sail area. She was a good boat, fairly fast, and towed well. But she didn't take, for some unknown reason. This is said advisedly for, today, that self-same model, built cheaply but ruggedly of waterproof plywood and backed by a strong national organization, has blossomed out as the Penguin Class and numbers approximately 1000 boats. There are fleets all over the country and the class is still expanding. All along the coasts, on the lakes and rivers, you'll find Penguins. Many are home-built, others have been turned out by professional builders at little more than half the price of the lapstrake dink of the same size and sail area. There are practically no lapstrake Frostbite dinks being built today but Penguins are still increasing, even though more slowly.

Perhaps the latest development in the dinghy situation is the 12-foot International Dinghy, designed by Harry Hall and marketed by Dyer. This is a racing machine, the hull being of moulded plywood. She has no frames, a super-smooth skin, and is practically leakproof. She carries the usual 72 square foot jib-headed sail, although the boat is capable of lugging more canvas. The Coast Guard Academy, at New London, has 30 of these craft, which are highly satisfactory. They have yet to "catch on" in any numbers in other localities.

THERE are many things which contribute to the popularity of dinghy racing. In the first place, a dinghy is just about the most economical small racing craft possible, in upkeep at least. She is in the water but a short time; paint and varnish stand up for a season or longer. Then, there is no mooring to bother about or pay for or keep up; you haul your dink out of the water after each sailing day, stow her away in boathouse, shed, garage or what have you, and forget her as long as you wish. No big insurance premiums to pay; no big yard bills to foot each season. A new sail a season if you are a racing man; otherwise, a single sail will last three or four seasons at least. A complete overhaul of the dink will not paralyze even a modest pocketbook.

Next, a dinghy race is more than a race. For, usually, a series of races is held of an afternoon, over comparatively short courses. If you make a mistake in one race, or just plain pull a boner and come in near the bottom of the fleet — well, forget it; in a few minutes there'll be another race and you can boost your point score for the day, with a chance of being among the leaders at the finish. And each individual race gives you an opportunity to exercise all the strategy at your command: starting maneuvers, turning marks, wind and tide hunting, reaching, running, and all the rest of it. Not just a single race but from five to eight races in an afternoon. And, as mentioned before, a blunder or a bad break — well, you don't have to wait an entire week for another chance to get up among the leaders.

Again, you don't have to do all your racing in one place since transporting a dinghy from here to there is quite an easy matter. An excellent trailer may be purchased for a few dollars or you can build your own from an old axle, wheels and tires picked up from most any auto junk yard, plus a bit of lumber. Tires, at least in normal times — today? Or a fine rack to fit on top of your car may be bought for much less than the cost of a trailer or, again, build your own. The modern steel-top cars take a rack in admirable fashion; pack the spars inside the dink, hoist the whole business aboard and travel as usual; you'll hardly notice the difference. Numerous sailors have traveled from the frozen North to sunny Coconut Grove to enjoy the popular Sunburn Regattas of the Biscayne Bay Y.C. — some towing their dinks, others carrying them topside. Take your choice, and race where you please.

A DINK calls for a skipper and a one-man crew — or one-lady crew. Many skippers take their wives along, others sisters or sweethearts. The ladies make expert crews with little training. If there are no ladies available, there are plenty of young men just aching for a chance to hike out on the rail of a fast, snappy, sporty dink.

There may be some who will claim that dinghy racing isn't real racing; no jibs, no spinnakers, and so on. But your expert dinghy sailor thinks differently. He knows what a difference it makes to alter his outhaul a single inch; the difference of leading at the weather mark or being back in the ruck. He knows what it means for his crew or himself to be a single foot too far aft or too far forward, for a dink is a short boat and fore and aft trim is exceedingly critical. He knows what it means to hike out and in with

"Cleopatra's Barge II" is now on patrol duty for the Coast Guard — another branch of the naval services for which we have converted famous yachts

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ROBERT JACOB, INC.
City Island, New York

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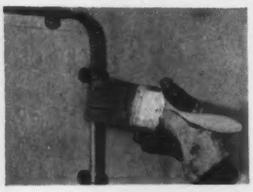
IN PAINTING

INTERPRIME SEALER is about the handiest product you can have in a paint shop. It dries in twenty minutes and makes an ideal ground coat for the regular paint which can be applied immediately. INTERPRIME SEALER positively seals in any sap stains and prevents the grain from flashing through. Saves time and paint and produces a better job. Available in WHITE, BLACK, GRAY and CLEAR. Used for Army, Navy and Coast Guard.



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INTERPRIME works wonders when you have to paint over insulated wires, tape or other spongy or staining surfaces. Makes a smooth foundation for the paint. Prevents stains from coming through.

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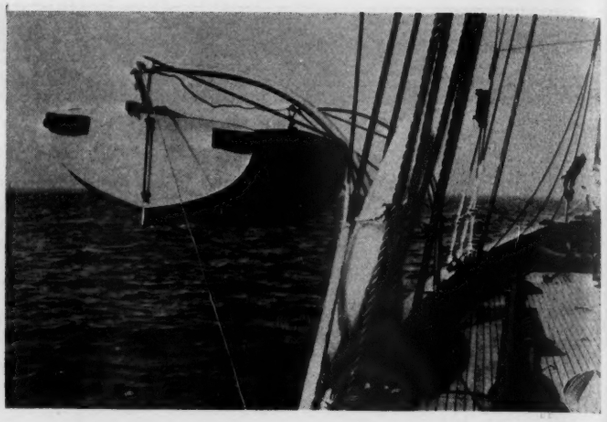
AGENTS IN EVERY IMPORTANT PORT



A racing dinghy must, of course, be a smart sailer. For use as a yacht tender, however, she must tow and row well and be dry and comfortable

every puff and every soft spot, keeping the dink on her best sailing lines. He knows the swift action and maneuverability of his craft, which calls for a keen, alert mind every second of the time. He knows he must "keep her footing" or a couple of small seas while he is "shaking her a bit" will slow him to a walk, while his competitors get a jump of two or three lengths in the twinkling of an eye. The experts will tell you that a really good dinghy skipper can, in a short time, become an expert skipper of a Six-Metre or an America's Cup contender; he has learned the "feel" of a boat, is sensitive to trim, knows what the proper set of a sail means, and what an error of judgment will do. And he learns to think fast and accurately — and he also learns the rules of the game sailing those six or eight races, in close competition, in a single afternoon.

So, we have seen how dinghy racing started and developed and have had a glimpse of what it is all about. What about the future?

To veteran "Dingbats," there seems no reason why dinghy racing and sailing should not continue for the duration, and prosper exceedingly when the present turmoil is over. For, in first cost and upkeep, the dink suits the man with modest means. She provides either the keenest of racing or an ideal means of enjoying plain sailing in harbors, on lakes or rivers, or any bit of protected stretch of water. There are thousands of dinghy sailors today. Why not many thousands tomorrow?

And what about the type of dink of the future? Well, with the huge strides being made in the waterproof moulded plywood type, with smooth skin and no frames, it would seem that this variety of craft would get a big play when the time comes. It is watertight, has a smooth skin inside and out, and is easy to recondition, particularly inside, with no frames to interfere with sanding and varnishing. It is lighter than other forms of construction and should "stand up" indefinitely without developing leaks. And, in case of physical damage to the hull, it is quite easily repaired. Some say it is faster than the lapstrake hull. Perhaps. I just don't know.

However, some students of the game feel sure that the lapstrake boat will survive the onslaughts of the plywood craft. And certainly the Penguin, with her low price, will continue her appeal to a whole lot of people.

So, Mates, you have the lowdown on sailing dinghies in this country. Whatever types of dink may survive, it's my firm conviction that dinghy racing and sailing is on a firm footing and that the future will see more of it than it has seen heretofore.

Viva Dinghy Sailing!

PRAISE THE LORD AND TRIM YOUR SHEETS

(Continued from page 51)

Teal, told me a tale of one of their experiences with the *Pecusa's* owner in a hotly contested race. It seems that *Tiny Teal*, carrying a parachute spinnaker, was overhauling *Pecusa* on a course which would have carried her to windward of the sloop which was using a Genoa jib. Just as they were about to establish an overlap, the Rev. Mr. Benjamin trimmed her down smartly and cut across *Tiny Teal's* bow, forcing her to luff, spilling the wind from her spinnaker. Now "Biggy," who has a voice that could double for the fog signal on Sou'west Ledge when he lets it go, ran forward and let his opponent have it with both barrels. Gentle tones came back across the water from the seagoing churchman, saying: "Why, Biggy, what are you kicking about? I'm sailing her according to the Good Book."

"Whaddoyou mean — Good Book?" yells Biggy.

"Well," replied the parson, "Doesn't the Bible say to luff your neighbor?"

Lifeline

Clear and intelligible directions, spoken over radiotelephone equipment, may mean success or failure to a military operation . . . a soldier's life or death. Our fighting men, though separated by vast distances, are closely linked . . . their actions coordinated by the lifeline of radio communications.

With production racing against time, Jefferson-Travis is developing new engineering designs and advanced manufacturing techniques to speed more improved radiotelephones into front line service with the United Nations. After victory, our equipment will serve the safety and convenience of free men throughout the world.

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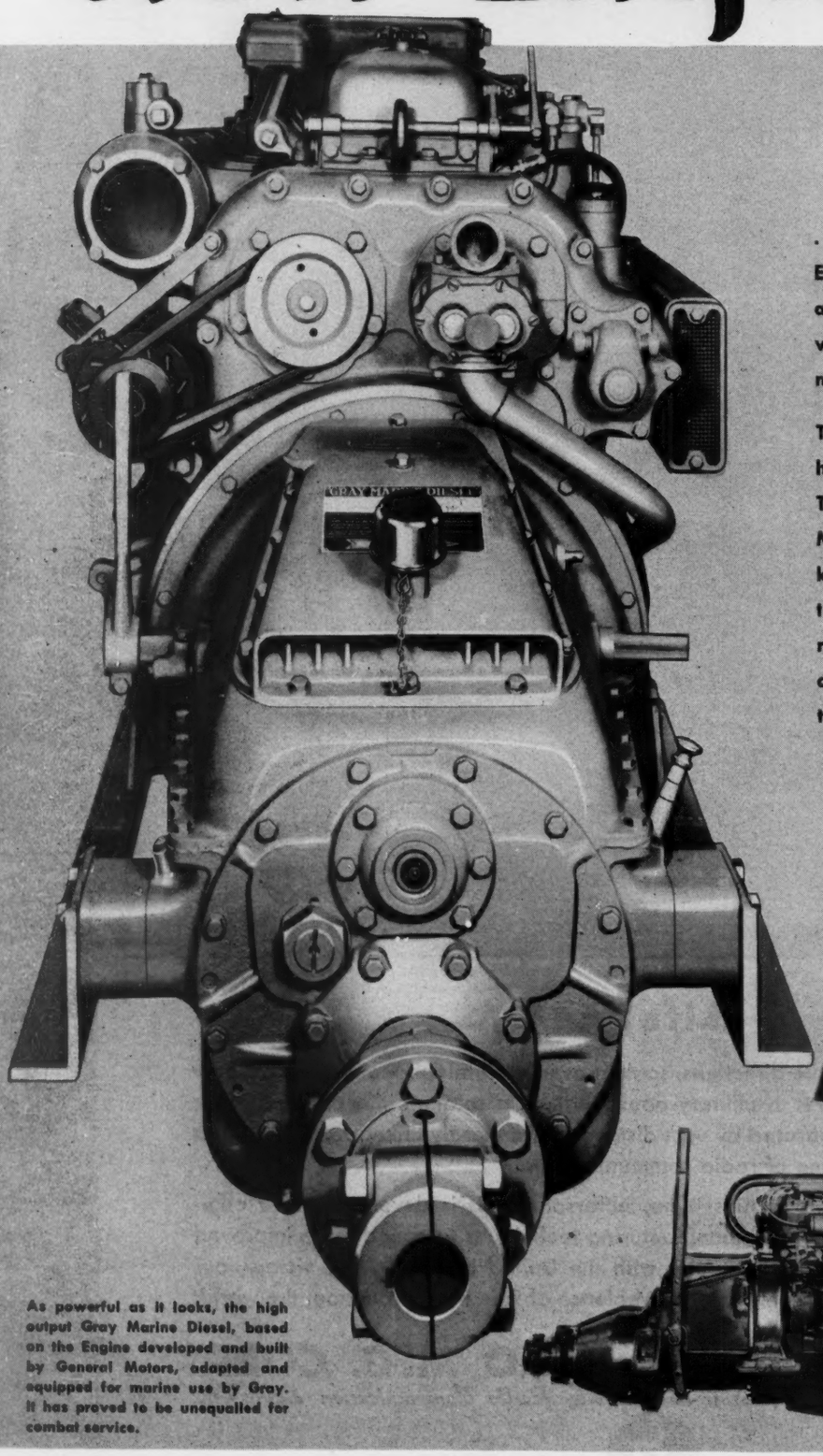
Manufacturers of Aircraft, Marine and Mobile Radio Communication Equipment

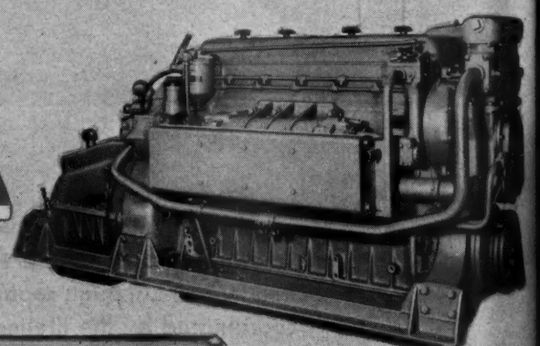
NEW YORK, N. Y. WASHINGTON, D. C.

New Engines *for*

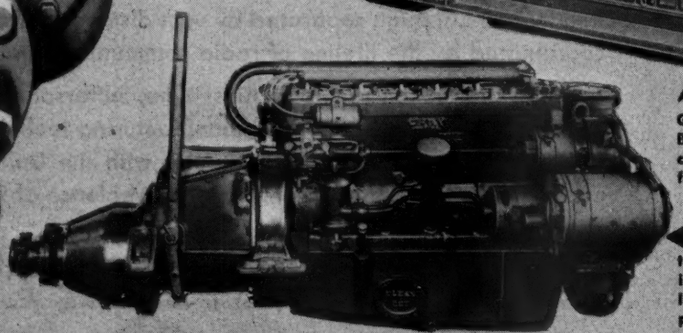


. . . For these new markets, Gray Marine Engines such as went into service in 1942 are setting new standards—standards that will eclipse anything known outside of engineering offices prior to December 7, 1941.

The far-flung operations of the U. S. Navy have given new importance to small boats. They have given Boat Builders using Gray Marine Engines the world's largest and keenest proving grounds. Continuous operation under all conditions and the stepped-up requirements for successful combat have developed new staminas that point the way to better boats and finer engines.



▲ 6-cyl. streamlined Gray Marine Diesel. Basic parts are interchangeable in all sizes, from 1 to 6 cylinders.



◀ The Model SIX-121 is typical of all standardized Gray Marine Gasoline Engines. Note compactness, low height and accessibility of all parts.

As powerful as it looks, the high output Gray Marine Diesel, based on the Engine developed and built by General Motors, adapted and equipped for marine use by Gray. It has proved to be unequalled for combat service.

GRAY MARINE MOTOR CO., DETROIT, MICH., U. S. A.

the New Markets

GRAY

MARINE MOTORS

GASOLINE

DIESEL

Within one year we have accomplished more in development than in 4 or 5 average years.

Gray's peacetime production included 24 compact gasoline engines, low and short. Each engine is designed, built, tested and guaranteed for a specific marine purpose . . . to do one job and do it better . . . to fit the boat without compromise. All have the patented Individual Porting design for smoothness, and other features exclusive with Gray.

Gray's Diesel Production is based on five standard sizes, 1 to 6 cylinders. Two-cycle compactness and efficiency; blower scavenging; direct injection; fresh water cooling on all models.

Gray will be ready . . . a letter from you, about your plans for tomorrow, will bring you useful information. The more you tell, the more we can help you.

Future Boat Owners—Young Men of the Navy eager to learn about Marine Engines.

INVALUABLE DATA FOR NEW OPERATORS AND FOR ALL BOAT OWNERS

Since Pearl Harbor, Gray has produced no less than 14 outstanding new Instruction Manuals, covering Gray Marine Engines, both gasoline and Diesel. Latest available to the general public is the informative new STUDENTS' MANUAL, a 275-page book on Gray Marine Diesels.

Marine Engine Builders Since 1906—Gasoline and Diesel

"It's been a mighty comfort to me, when I was caught off shore in squalls. And you are going into a squall that has turned this old world into a whirlpool of madness. I hope you won't ever need a life preserver, but there's comfort in the thought that if you should, you've got one here that NEVER LETS YOU DOWN. Good luck, boy."

And that's the spirit of American sportsmen in foregoing their favorite Ta-pat-co Life-save equipment for our Soldiers, Sailors and Marines. Ta-pat-co factory materials and facilities are being devoted exclusively to war needs. But after Victory is won, we will again look forward to supplying Ta-pat-co Life-save and sports equipment to you through your favorite marine and sporting goods dealers.

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BOAT CUSHIONS

LIFE PRESERVERS

STAY-A-FLOAT

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OUTDOOR SPORTS EQUIPMENT

FIGHTING

AMERICAN PAD AND TEXTILE CO., GREENFIELD, OHIO

WAR IS HARD ON OLD LADIES OF THE SEA

(Continued from page 40)

to the Versailles treaty conference. He traveled in a suite furnished with gold-knobbed chairs and beds.

American men of 1917–1918 in Army olive drab and overseas caps, who filled her hull four tiers deep and were bunked almost to the bases of her two tall funnels, will never forget the old *George Washington*. Scores of little war items come back with memories of the old army transport:

The little card officially announcing arrival overseas . . . the card that told hold, bunk number, messroom, washroom, boat station . . . kitchen police and guard duty . . . the same old Army, land or sea. No smoking on deck after dark, no heaving of containers into the sea to leave a wake for submarines to follow.

Life belts on, night and day . . . cold salt water baths — with a shudder and an itch . . . the bunks of wire . . . men stacked up in tiers with beams and water pipes pressing down overhead. . . . The night glimmer in the troop compartments, with rows on rows of sleeping men, snoring and wheezing . . . there were seasick men, too, who vowed they would never come home again across such an ocean. . . .

Phantom submarines almost every day, but almost no one really saw one. . . . Convoy zigzagging . . . mess tables swinging overhead. . . . Lifeboat drills at which all hands turned out to make the boats and rafts look hopelessly inadequate . . . canteen of water on the hip of each soldier and two "edible naval rations" for men on the rafts, who presumably faced a picnic among the waves.

THERE was reveille an hour before dawn, with all hands on deck, for it was then that the convoy loomed on the horizon as a good torpedo target while periscopes would be almost invisible. . . . . Rumors of destination and that the war was over. . . . Those fellows who went around carrying a bottle of olives as a sort of talisman against seasickness . . . nights on deck, rolled up in overcoat and blanket. . . . The huge, unpromising doughnut-shaped rafts with men draped around them.

The *George Washington* could feed 7,000 men in 80 minutes, and the ship eventually got her carrying capacity up to 12,000 men, by a system of using bunks in relays. She carried nearly 100,000 troops to and from France, when not engaged in carrying the President on his peace and League of Nations junkets.

By a curious twist of fate, the liner was particularly fitted for her war service under the Stars and Stripes. Besides being one of the greatest troop carriers, she was the only one of the ninety-seven German liners seized in United States ports to carry an American name with American spelling, and so the only one to retain her original name. Before her seizure, her German engineers had done their best to wreck her engines and fittings but these were repaired and she went to war, even then a ship with memories and proud traditions.

When built, the *George Washington* was decades ahead of her time. She could carry 11,000 tons and 3,000 passengers, the greatest carrying capacity of any liner in the days when she was young. Express liners of the 1930's, like the *Bremen* and *Amsterdam* — most of them about half power plants — did well to stow 1,000 tons of cargo.

The *George Washington*, one of the greatest earners at sea before World War I, was decorated after the simple American style of Colonial days and emphasized natural timbers, conservation of space and restraint in wall decorations. Gone were the gilt and heavy hangings, and the ornate fixtures. Her suites were luxurious, with six and seven rooms, and on her upper decks she had staterooms with windows instead of ports. Only her tall stacks betrayed her as a product of another day. She never could do more than 19 knots but was equipped with every known safety device.

THE fate of another famous old liner sucked into the vortex of a war that is worldwide in fact as well as name is not as obscure, for despatches from Europe and even pictures passed by the censor showed the gallant old *Rotterdam* of the Holland-American Line aflame at her wharf in bomb-blasted Amsterdam.

She had not been in her home port long before the Nazi blitzkrieg machine swept the Netherlands. In fact, it was only in January, 1940, that she had sailed mournfully out of New York on a last voyage, with the yard of a shipbreaker as her destination.

The demands of modern times had caught up with the liner. Except for a layup period of three years during World War I, the *Rotterdam* operated steadily for 32 years. During that time, she sailed over 1,500,000 miles and, for most of those years, held her own against the most aggressive competition the North Atlantic passenger traffic could provide. But the liner really belonged to that bygone era in steamship travel when crossing time was not the foremost consideration, and comfort rather than speed was important.

She was the third liner to carry the name *Rotterdam* and, like her predecessors, was built in the yards of Harland & Wolff, Belfast. When she

Long before there was a War-
STEWART-WARNER INSTRUMENTS
were used by the U.S. NAVY

And today—in a thousand and one "tight spots"—these dependable precision instruments are proving their worth! Among the craft using Stewart-Warner instruments in government service are aircraft tenders, landing boats, tank lighters, patrol boats, crash boats, rearmament boats, quartermaster corps boats, picket boats, ship-to-shore boats, and aircraft rescue boats.

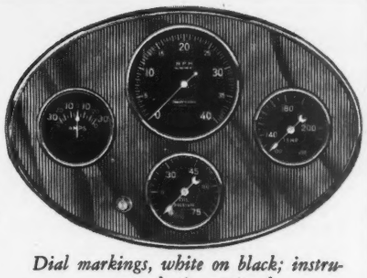
Precision-Built for Accuracy in Action!

Dial markings, white on black; black enamel bezel; oil gauge, ammeter, tachometer.

"THE MATE"
Designed for short, narrow instrument boards, as in light cruisers, runabouts and other small craft. Size: 11 29/32" by 4 29/32"; flush-type mounting; indirect lighting.

"THE COMMANDER"
This is the panel with all electrical instruments. Electric sending units for gauges and tachometer generate current required to operate instruments. Overall length, 7"; height, 6¼". Mounted from rear of board. Indirect lighting. Dial markings, white on black; white pointer has red tip.

"THE ADMIRAL"
Available for either gasoline or Diesel engines; special fuel oil pressure gauge optional for Diesels. Size: 11⅛" by 7⅜"; mounted from front of board; indirect lighting. Straight-out connection on tachometers unless elbow specified.



Dial markings, white on black; instrument selection optional.

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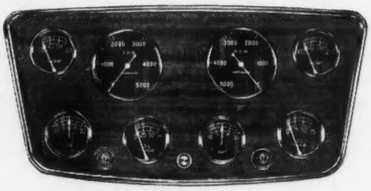
To be mounted independently in wood or metal instrument board; your choice of many face readings. Diameter, 4 5/16".

MAGNETIC TACHOMETER
Has jewel-supported pointer staffs, pre-aged magnets, temperature compensators. Built for accuracy under severest use.



Ignition switches available if desired; dial markings white on black.

"THE MASTER"
Ideal for twin-screw installations, with two complete sets of instruments: tachometers, ammeters, oil pressure and water temperature gauges. Size: 14 15/16" by 7⅛"; indirect lighting. Engine-turned, mahogany, or black wrinkle finish.

AMMETER **OIL PRESSURE** **TEMPERATURE**

These accurate mechanical gauges for independent mounting have the same high quality precision mechanisms used in gauges supplied with Stewart-Warner Instrument Panels. *Electric temperature and oil gauges also available.*

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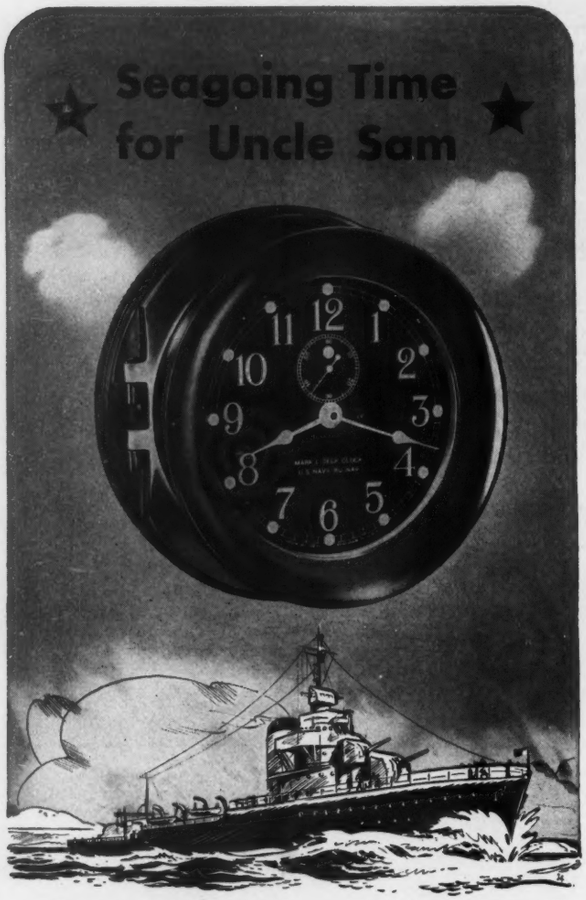
Another Product of STEWART WARNER



WHEN YOU READ of a particularly successful American land and sea action, the dispatch usually includes this phrase: "The naval support was perfectly timed." Timing in the Navy is as important as men and guns and ammunition.

Seth Thomas* is proud to be able to devote a heritage of 129 years of fine clock-making to the Navy. And to our Navy goes every marine clock like the one you see pictured above.

Other Seth Thomas clocks are serving with the ships of the U. S. Maritime Commission, the Coast Guard, and other of our armed services throughout the world . . . helping to win the war.

That is why no more Seth Thomas marine clocks are being made for civilian use. But after the war is won, the same fine movements used in Navy clocks will again be available to our many seagoing civilian friends.

Meanwhile, keep 'em sailing!

. . .

Seth Thomas Clocks, Thomaston, Connecticut. A Division of General Time Instruments Corporation.

GTI

*Trade Mark Reg. U. S. Pat. Off.

SETH THOMAS CLOCKS

SELF-STARTING ELECTRIC OR KEY-WOUND

went into service in 1908, she was one of the big ships on the North Atlantic, having a gross tonnage of 24,149. When she made her maiden entry into New York Harbor, she created as much interest and excitement as did the *Queen Mary* and *Normandie* on their arrival.

An atmosphere reminding the traveler of lavender and old lace hung over the ship in her last years. She had turkey red carpeting and old-fashioned plush furniture. Her elevators operated in open shafts; her electric fixtures were ornamental in their involved way and her stewards walked softly, serving the passengers with an elaborate and genuine courtesy.

The *Rotterdam's* log was marred by only one serious accident during her years in service. On a West Indies cruise, she went on a reef on Morant Cays, some 50 miles southeast of Jamaica. She was worked off and made New York under her own power.

She brought many Americans home in the summer of 1914 as war enveloped Europe, and helped return Yankee troops to these shores after the armistice. The *Rotterdam* broke into the news in 1915 when an American newspaperman entrusted to her purser a brief case filled with the private papers of the Austrian Ambassador to the United States. The British confiscated the brief case when the liner made her customary call at Falmouth. The papers were turned over to the United States Government and some of the documents were of such a sensational nature that the Austrian diplomat was returned to his own country.

When it was announced that the fine old *Rotterdam* had reached the end of her long, honorable service, the Holland-America Line received a letter from a Cleveland, Ohio, man who said he had been born on the ship in 1921, and asked if he could have some small article from the liner as a souvenir. He added that his middle name was Rotterdam.

MENTION of the Holland-America Line naturally recalls the "luckiest ship" of its fleet of fine liners and freighters. The designation was conferred on the *Ryndam* during the liner's service in World War I. The ship was tied up in the Hudson River with a number of other neutral vessels when America entered the war in 1917. The shortage of American-flag ships capable of conversion into troop transports caused the United States Navy to take over several of these neutrals for war service. The *Ryndam* was commissioned in the United States Navy in May, 1918, and a Navy crew replaced her civilian personnel, which was sent back to Holland.

That the *Ryndam* sailed under a lucky star is stoutly maintained by her crew which holds frequent reunions and delights in recounting certain adventures that prove just how lucky their beloved ship was. The most important evidence presented is the recollection that she was present and close to both the *President Lincoln* and the *Covington* when those transports were torpedoed.

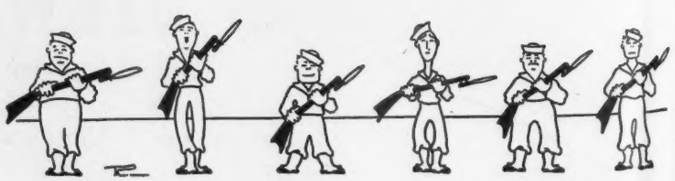
The captain of the *President Lincoln* was a great stickler for his seniority rights. Leaving Brest on the *Ryndam's* first homeward voyage as a transport, he insisted that the latter ship, whose master was junior in rank, should relinquish her convoy position for a more exposed one, previously assigned to the *President Lincoln*.

About 8:30 on the morning of May 31st, with the convoy some 420 miles out of Brest, a U-boat fired a torpedo that passed across the *Ryndam's* bows and struck the *Lincoln* under the bridge. The big transport was seen to be sinking as the *Ryndam*, obeying a standing convoy order to scatter when attacked, proceeded to make herself scarce in that vicinity.

Exactly 31 days later, the former Dutch liner was steaming along only 400 yards to starboard of the transport *Covington* when the latter was torpedoed in the coal bunkers. This time the "tin fish" passed just astern of the *Ryndam*.

ANOTHER incident the transport's sailors love to narrate occurred in early June as the *Ryndam* was entering New York Harbor at the end of the voyage that had seen the *President Lincoln* sunk. The ship carried four six-inch guns and, after she had come through the submarine nets in the Lower Bay, the gun crews were told to unload the guns. While working in the darkness on No. 2 gun forward, a contact was accidentally made and a six-inch shell roared across the bay into Jersey City, hitting the roof of a schoolhouse and dislodging a water tank without loss of life. Again the *Ryndam's* luck held, for, had the mishap occurred at 2 o'clock in the afternoon instead of that hour in the morning, many children and teachers might easily have been killed.

A smart ship throughout her war service, the fine old liner went around the world in 1926 as a floating university.



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IT'S the voice of a vengeful America . . . attacking!

Speaking from the sandy beach of a tiny island in the vast Pacific, that voice is going to echo around the world.

The man and the thousands upon thousands of other tough scrappers who follow him ashore onto stolen soil will come piling through the surf in . . . motor boats. Great gray battle-wagons and deep-laden transports will bring the task force safely from our shores to the enemy's shores . . . but it takes a multitude of "little motor boats," packed to the gun'ls with fighting men to ENGAGE THE ENEMY!

Before this war is over, the Axis is going to hate us small boat manufacturers.

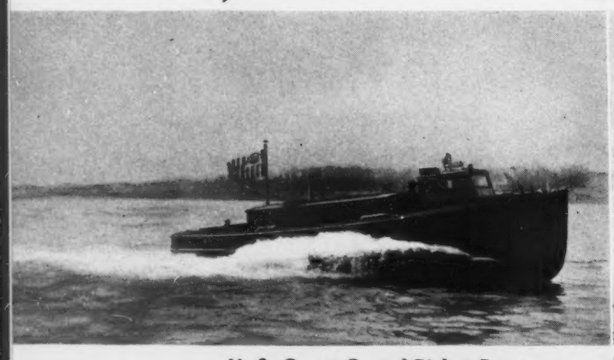
THE Owens YACHT CO.
DUNDALK, Baltimore, MD.

FROM THE ISLES OF

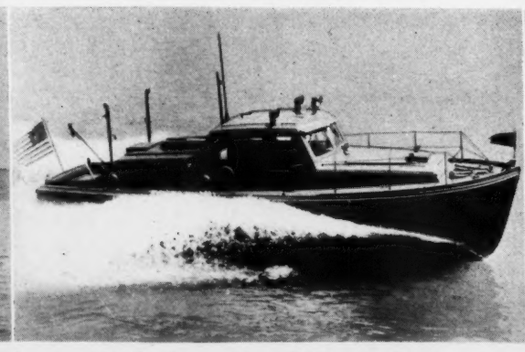
HALL-SCOTT FOR THE

U. S. Army Aircraft Rescue Boat
Hall-Scott DEFENDER powered

Canadian Navy Fairmile Patrol Boat
Hall-Scott DEFENDER powered



U. S. Coast Guard Picket Boat
Hall-Scott INVADER powered



U. S. Army Aircraft Rescue Boat
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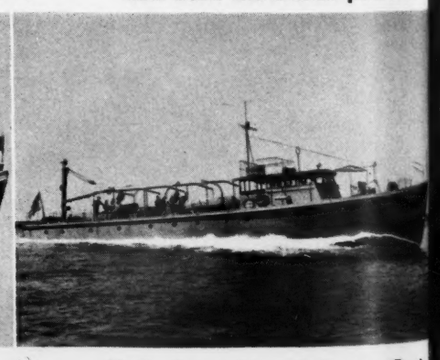


U. S. Army Aircraft Rescue Boat
Hall-Scott DEFENDER powered

HALL-SCOTT MOTOR CAR

"WAY DOWN UNDER" to the shores of Tripoli!

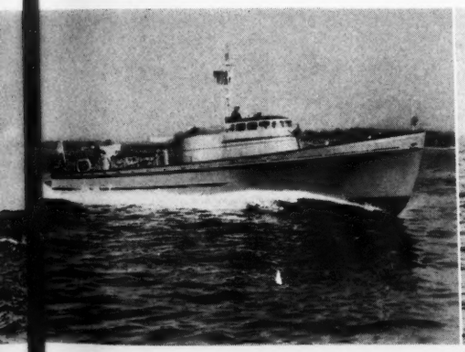
WHEREVER the fighting is the thickest — look for Hall-Scott!

For Hall-Scotts have the *dependability* on which a man can count when the going is the roughest . . . the *stamina* to carry on hour after hour and day after day . . . and the surging *power* that drives home to victory!

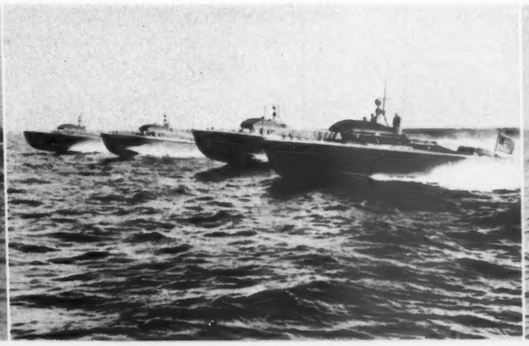
The remarkable records set by Hall-Scott INVADER and DEFENDER engines in active service with our Army, Navy and Coast Guard, and with the British Navy, as well, are no accident. They result from Hall-Scott's superior design, extreme care in workmanship, and measurement tolerances throughout these engines approximating one-half those in usual commercial use.

It has been Hall-Scott's achievement to transfer these custom-built standards of accuracy to the manufacture of Hall-Scott engines on a production scale.

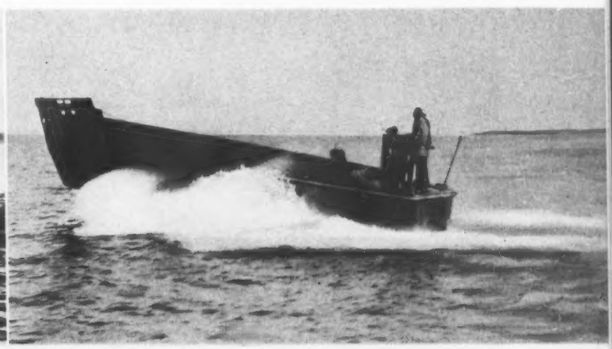
THE ARMY . . . THE NAVY . . . THE COAST GUARD . . . AND THE BRITISH NAVY



U. S. Coast Guard Patrol Boat
Hall-Scott DEFENDER powered



U. S. & British Navy Rescue Boats
Hall-Scott DEFENDER powered



U. S. Navy Ramp Boat
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U. S. Army Aircraft Rescue Boat
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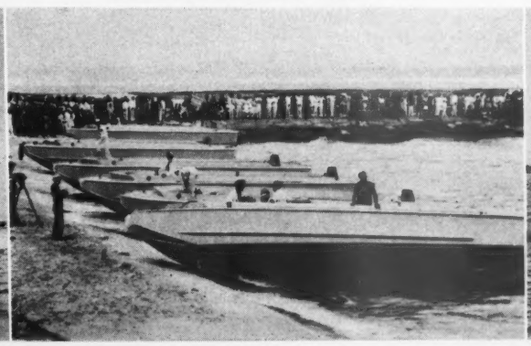

U. S. Navy Landing Boats
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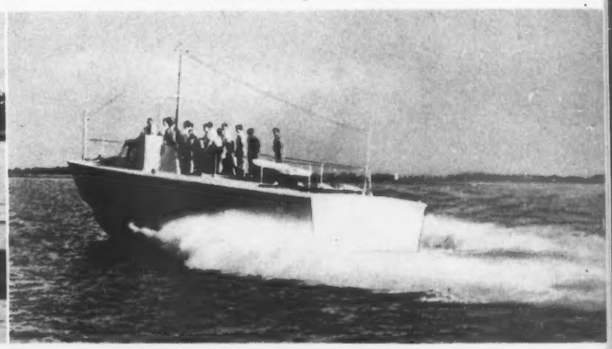

British Navy Torpedo Boat
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R COMPANY

ARMY E NAVY

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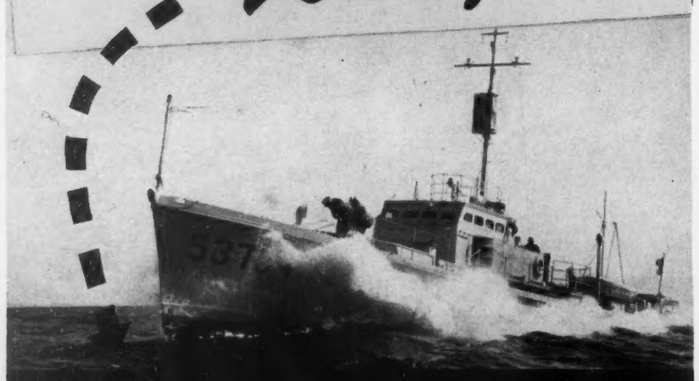

Fig. 1

Here are some of the non-ferrous and stainless fastenings Harper is now furnishing to hundreds of Uncle Sam's ship builders.

CARRIAGE BOLTS (Fig. 1)—In 5 alloys (for frames) ¼" to ¾" diameter, any length you need made to order. 262 stock sizes in Brass, Naval, Everdur, Monel and Stainless.

STRUT BOLTS (Fig. 2)—(For holding struts). Made to order PROMPTLY; any diameter ¼" to 1¼", any length. Usually made of Monel, Bronze or Naval.

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NAVAL BRASS NUTS (Fig. 3) — ¼" to 1½" Naval specifications 43B11C and 46B6J. Continuous production of large lots for Navy needs. Also Brass, Everdur, Monel and Stainless nuts.

FLAT HEAD BOLTS AND SCREWS (Fig. 4)—For Port Holes, deck equipment and dozens of ship uses. BIG ones ½" to 1" diameter. Brass, Bronze, Everdur, Monel; many stock sizes.

4320 STOCK ITEMS ... of bolts, nuts, screws, washers, rivets and accessories in the non-ferrous and stainless alloys. Specials made to order. Send for 84 page catalog.

ARMY E NAVY Awarded Dec. 7, 1942

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CHICAGO, ILL.
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NEW YORK CITY
Offices in Principal Cities

Fig. 2

Fig. 3

Fig. 4

HARPER Chicago
EVERLASTING FASTENINGS

ICE BOATS

(Continued from page 38)

devote a little space to describing the typical general purpose runner, the one most used and the one from which all special types are developed.

Such a runner for a Class C boat will look about as follows: Length over all, 60"; length of shoe, 54"; length of V-edge on shoe, 48"; angle of V, 85°; material of shoe, cast iron; tops of runners, white oak; thickness of tops, 1¾". Proper sharpening of V-edge: sharp for 12" to 16" directly under the riding bolt; flat for this same distance; gradually more and more rocker and less and less edge as the two ends are approached, until the edge is literally as round as a lead pencil at the extreme ends. The rocker should be about ⅛" at each end, not counting the final upward sweep, which should be carefully smoothed and rounded. Everything that contributes to an easy "entrance" for the runner is vital to speed. The sharpened faces of such a general purpose runner should be about ¼" wide. Wider faces give better support on soft ice but they are a terrific job to sharpen; angle iron runners, with really wide bearing faces, are suggested for soft conditions.

THE two main runners are, of course, identical. The rudder is a counterpart of the main runners, somewhat shorter to make it easier to turn but otherwise similar. Bow-steerers carry a much longer rudder than stern-steerers, because their rudders carry half the mast pressure, as noted above. The typical bow-steerer uses a rudder about three-fourths the length of her main runners, whereas the stern-steerer's rudder rarely exceeds half the length of her big runners. All runners are mounted on single through bolts, permitting up-and-down rocking as they pass over bumps. The proper position of this bolt in the length of the runner has a great deal to do with performance, and many runners are provided with two or more bolt holes, for use on various types of ice surface. The working principle is this: A riding bolt abaft the center of the runner will put more blade ahead of the weight, and hence will provide a longer lever arm for lifting that weight over each little bump. On smooth, hard ice (the kind we dream about and rarely see), this advantage may not be needed. The fact that ice conditions are rarely, if ever, perfect has resulted in the general practice of mounting the runner at a point about three-fifths of the way aft along the blade. Thus the 54" shoe mentioned above would be "hung" about 21" from its stern end, and the sharpest portion of the blade would be directly under this point, well abaft the center. Such a runner will run far more easily than one with the bolt further forward, especially over bumps and through soft ice.

RUNNERS deserve good care. Their edges should be protected from nicking by canvas bags or wooden scabbards when not in use, and they should be removed from the boat, thoroughly cleaned, dried and the edges wiped down with oil whenever the boat is laid up for more than overnight. Remember to use light machine oil and to wipe it off before using the runners again. Heavy oil, when cold, is just so much sticky jelly; many a sluggish performance on snowy ice has resulted from the skipper's neglect of this one point. Contrary to popular belief, runners treated and used with reasonable care require little sharpening during a season. Naturally, letting them accumulate rust, dragging them up on stony beaches and sailing them over stones and pieces of wire is going to make work at the filing bench — but don't blame the runners!

Filing runners is an art but, in brief, the basic "don'ts" are these:

Don't file across the blade; always run the file with the runner.

Don't work with a bad file or a bad vice. Use a good, steady vice or, preferably, a set of blocks with notches for the runner tops at such an angle that the blade faces will lie exactly horizontal.

Don't file one side down more than the other; keep them even, to keep the edge on center.

Don't use too coarse a file, and don't fail to knock the filings out of it after *every* stroke.

Don't be afraid to work; runner-filing is tough.

Don't expect the same care in a hired job as in one you do yourself.

The runner tops require little or no special care, beyond varnish or paint to keep the weather out. The stud bolts that hold the runner shoes to the tops should be taken up every fall, to offset any shrinkage of the wooden tops which may have occurred during the summer.

AND so we have worked out a modern ice boat, from rig to hull to runners. She is about as fast and sensitive a machine as the average man can build for himself and, like anything fast and sensitive, she can be handled or mishandled with equal ease.

THE END

ANOTHER DIRECT HIT

Back in 1910 the new-type shallow-draft Mathis Houseboat set the yachting world agog. But year after year Mathis-type houseboats and houseboat-cruisers of all sizes were even more prominent.

In 1917-18 we produced 30 submarine chasers for Uncle Sam in World War I.

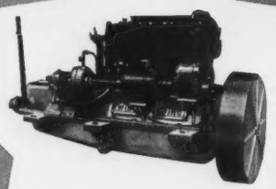
In World War II, even before Pearl Harbor, we were at it again. Uncle Sam wouldn't want us to tell how many 110-foot submarine chasers we have completed—how many are under way in our new enlarged yard. But he gave us the NAVY "E" last March, and now a star for continued excellence of performance.

Which means that all our effort for the duration goes into building for VICTORY. Then, we'll be glad to renew our pleasant, peacetime relations with America's boating enthusiasts.

MATHIS YACHT BUILDING CO.

GLOUCESTER CITY, NEW JERSEY

Red Wing



Marine

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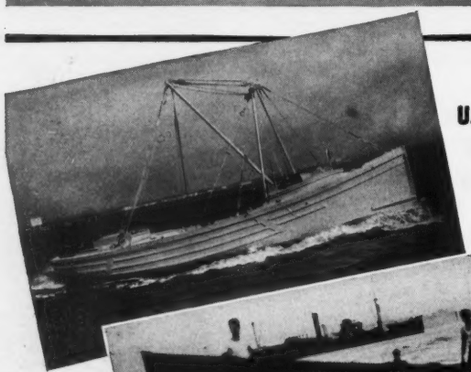

U. S. NAVY BUOY BOATS

U. S. NAVY SALVAGE BOATS

Uncle Sam expects Red Wing Engines to do their duty. And Red Wings are ready — with full power capacity — with speed and smoothness — with the stamina that's been *proved* so many times, and over so many years in sea-going service.

But, good as peace-time Red Wings have been . . . good as wartime Red Wings have to be . . . tomorrow's Red Wings will be even better. Until then, we'll do our utmost to keep your Red Wings running, with service and parts.

ENGINES AVAILABLE FOR ESSENTIAL NEEDS

20 Gasoline Models..... 8 hp. to 125 hp.
Spark Diesel Types.....42 hp. to 200 hp.

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GET THE LATEST RED WING CATALOG

RED WING Marine ENGINES

RED WING MOTOR CO. RED WING, MINN.

UNDER THE LEE OF THE LONGBOAT

(Continued from page 49)

offered and, I trust, accepted, I rise to state that my position as a navigator is now unique. Who else can claim to have shot the upper branch of the moon when it was in north declination, worked it as a shot of the lower limb of the sun in south declination and to have found himself only 20 miles out in his calculations? . . . I bet George Mixter, whose "Primer of Navigation" I find wherever I go, has never heard the likes of it.

In closing this month, I want to state that I'm taking a firm stand about the Waves, God bless 'em. I mean, I'm not making puns and jokes at their expense. No sir. Caleb Bilgewasser, who is old enough to know better, can hold them up to ridicule if he wishes but I say that Waves are people just like anybody else, and that I shall repeat nothing that detracts from their dignity, God bless 'em. Now take the case of the pretty little thing that reported for duty at a Navy section base and at lunchtime asked a sailor where she ate. He replied: "You mess with the officers, ma'am — I mean, sir." And I'm morally certain she was misquoted when alleged to have said: "I know I mess with the officers. What I asked was, 'Where do I eat?'"

WHAT EVERY WOMAN WANTS

(Continued from page 46)

Only three operations are performed in the galley; mixing drinks, cooking, and washing up, and of these, the first two are not only the more pleasurable but also the more important. With this in mind, therefore, my galley will include a stove set in gimbals so that the pot of soup will not spill over when the boat is under way, or rolling at anchor in the swell of a passing boat. It must also have a good sized, well insulated ice chest. I prefer a chest that opens at the top into which the food is packed although in some respects it is less convenient than one with a side door. The latter is apt to be dangerous. Even though the lock never slips its mooring, all the food on the shelves crowds against the door when the ship is rolling and woe to the cook who opens it at such a time. It's enough to make even the sweetest mate turn sour. However, if I saw a boat perfect in all respects except for the refrigerator, I'd take her, fasten battens across the shelves to hold the food in place and then talk of the compensations of ample shelf space.

AFTER eating or drinking comes the washup. The job can be delayed; it cannot be escaped. But it is an unfair handicap to expect a dishwasher to perform this labor of necessity in a sink of dollhouse proportions. If the galley is so small that an adequate sized sink cannot be installed, I'd use a dishpan. The old fashioned dishpan not only has the advantage of being man-sized but it can be set directly on the stove and the dishes washed as the water heats. Besides, it comes in handy for collecting lobsters from the lobster man and for cooking them on the beach.

There can't be too much locker space in the galley. You need space for pots and pans, plates and cups, and for such essentials as can opener, ice pick and corkscrew. As for food, even for week-end cruising it bulks up to rather tremendous proportions; for a cruise of a week or two, the amount of food which must be stowed, until it is stowed away by the crew, is something to figure. Of course, the food can be tucked away on shelves in the main cabin, or in drawers up forward, but then where will shirts, pants, handkerchiefs and other necessary items find a safe resting place? Or, if the pots are stowed in the blanket locker, where do the blankets find boat room? In my comfortable small cruising ship, I'd look for adequate stowage space for all gear needed for crew and ship. Sailors have done with less, but more is always better than less.

ONE way to decide what locker space is needed is to visualize life afloat, a variety of day dreaming which is next best to the real thing. All right, you are now aboard. Your clothes are freshly pressed and you want to keep them in this condition for the return trip home, for a dance at the club or for some other gathering where fresh pressing is expected. A locker is needed in which to stow shore clothes and this locker should be tall enough so that slacks or dresses need not be folded half a dozen times before they are hung. Clothes used on the boat can be folded so a small locker or drawer will do. And how about the wet weather clothes? Stowage space is needed for these too and the best place is near the entrance to the cabin. It is a tough enough job to keep a cabin dry on a wet day without carrying dripping clothes through it to a forward locker. Bulky items like blankets must also be stowed and these require space. But there are half a dozen ways of providing it.

And now to bed. First of all, how many bunks should there be? Unless the family adds up to an odd number and guests are never invited, I'd

To our boys who ride the air ways,
To our boys who sail the sea,
To our boys who fight our battles,
Where ever they may be.

". . . our hearts, our hopes, are all with thee,—
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant o'er our fears,
Are all with thee,—are all with thee!

"Humanity with all its fears,
With all the hopes of future years,
Is hanging breathless on thy fate!"

From "The Building of the Ship" by Longfellow

PARAGON GEAR WORKS INC. · TAUNTON, MASS.

WANT A BOAT?

Here's what we suggest you do: Invest all your spare cash in U. S. War Bonds . . . . at least 10% of your income. While your money is thus placed in Uncle Sam's trust, he will use it to buy the equipment the boys at the front need to win the war.

When the war is over, and won, you can turn in your bonds and have *spot cash* ready to lay on the line for your Dunphy boat.

And there will be some tangible reward in waiting . . . . because already we see improvements coming which will add new pleasures to post-war boating.

DUNPHY BOAT CORPORATION
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for the MARINES

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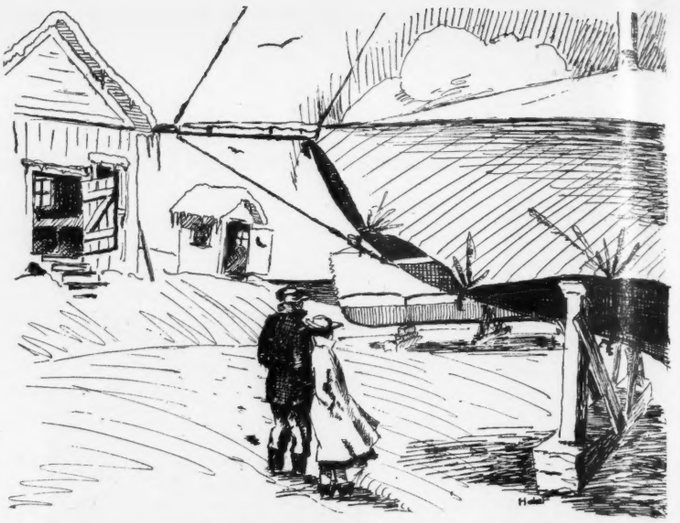
Until Victory is completely in the bag, the capacity time of every man and machine in the Dunphy plant is, and will be, dedicated to the needs of all our fighting forces.

Dunphy



The search for the perfect boat keeps Skipper and Mate outdoors, prowling through many yards inspecting yachts in storage

want a boat with two, four or six bunks. An extra bunk is liable to cause trouble unless there is a single man or woman for whom it is specially reserved, for it encourages an invitation to another couple — the lady will sleep inside and her companion of the stronger sex can sleep in the cockpit. Theoretically, outdoor sleeping sounds all right but, practically, only a few can take it and it seldom happens that they are the guests. The dew gets into their hair, the rising sun into their eyes and a gremlin acidifies their disposition. In my comfortable ship, there must be inside accommodations for everyone in the party; if anyone decides to sleep above deck, that's all right, but there will be a bunk waiting for him inside so that when the rain comes he can duck below.

It is easy enough to dream of a perfect ship but it's a harder job to make the dream come true. Then it is a question of compromising the ideal for the real — but I wouldn't compromise too far. A handyman or a handywoman can work marvels in the cabin of a small boat but neither one of them can perform miracles.

START out to buy the perfect boat, then, with dreamy eyes and a practical mind. Climb on board; you can't get the feel of her until you step into the cabin. Walk around, open doors and pull out drawers, try the elbow space and the foot space. And, while you do this, visualize what the cabin will look like and be like when the ship is in commission. A boat seen on a winter day, with nothing in place and a layer of dust dulling brightwork and paint, has to be viewed with imaginative eyes. When boats are displayed in a showroom, they're polished up to shine, and they're furnished even unto nautical ashtrays and pillows, but most boats laid up in the shipyard have a grimy, out-of-commission look. It's up to the prospective skipper and his mate to see through the dust and to visualize what she will look like when she's clean and pretty. And, if the cabin did not fit into the pattern of the dream, I wouldn't look further. Even though the hull were a beauty, and rig and motor were right, I wouldn't want her unless the cabin was cut from the same piece as my dream. A good ship and a comfortable one — that's what I want, to which all honest women (and men) say "aye."

POST-WAR PACKET

(Continued from page 57)

Construction is about as simple as possible without resorting to slab sides and a flat bottom. The keel is a piece of spruce 3″ x 12″. Chines are made of spruce and are in two pieces to make for easier bending and to eliminate the stresses set up in curving heavier members. This also will make the cutting of a chine rabbet unnecessary as the required landing can be left when fitting the two pieces together. They will be fastened with waterproof glue and screws. The stem and knee should be of oak, yellow pine or Philippine mahogany. The transom and its knee may also be of oak or Philippine mahogany. All pieces are to be glued as well as securely screw fastened. The frames and deck beams are of 1¼″ spruce, the heavy, rabbeted beams which form the framework of the cabin may be made in two pieces and glued together like the chines. They also are of spruce, which I have found to be a most satisfactory wood for the construction of frames, as it is light, tough, holds fastenings well and takes a nice finish.

The planking will be gotten out of eight pieces of 48″ by 12′ by ⅜″ waterproof fir plywood. There will be a butt joint at frame Number 6, which has been made double for the purpose. This joint will also be rein-

SOME DAY...

ask the boys from the Aleutians!

THE storm-swept roadsteads of the Aleutians were never made for "happy landings". No placid harbors here, no capacious wharves or rippling beaches! So, crashing through gale-lashed breakers, the dories, skiffs and work boats go . . . landing on craggy coastlines . . . handling ton-by-ton the precious cargoes of men and materials, food and supplies, that must be safely ferried from ships to shore.

It's a "destruction test" for small boats—and for hundreds of rugged Evinrudes that help drive them. At many a tough spot, a few short weeks is long life for battered boats . . . but salvaged motors drive *on and on* . . . peacetime products proving their stamina in grim and relentless wartime service.

Today, new Evinrudes are being built for only one purpose . . . *to help win the war.* When that need is past . . . and you're thinking of buying a new motor again . . . just "ask the boys from the Aleutians" — and from many another front! Ask *them* what they learned about motors, out there where the going really gets tough!

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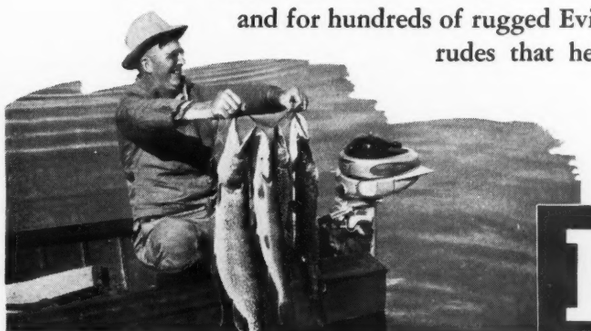
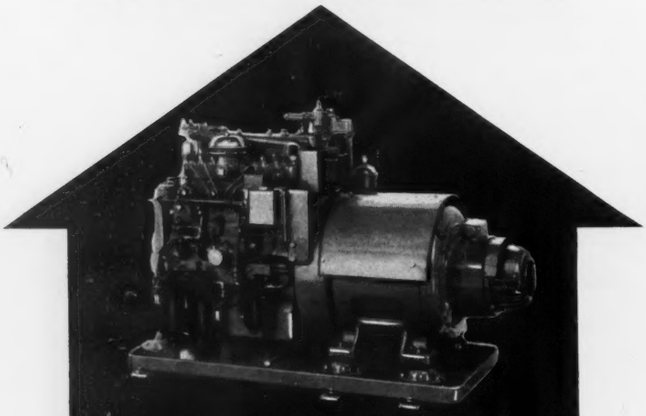


☆ Every War Bond you buy helps speed America's Victory. Then, good fishing to you!

EVINRUDE
OUTBOARD MOTORS

THE UNITED STATES MOTOR CORPORATION

PRODUCTS MUST GIVE SERVICE



Our traditional slogan, "U. S. Products *Must* Give Service," means more today than ever. For now, on the vast fighting fronts ★, U. S. Electric Plant performance is playing a vital role in winning battles — saving lives. Electricity is the nerve center of modern warfare!

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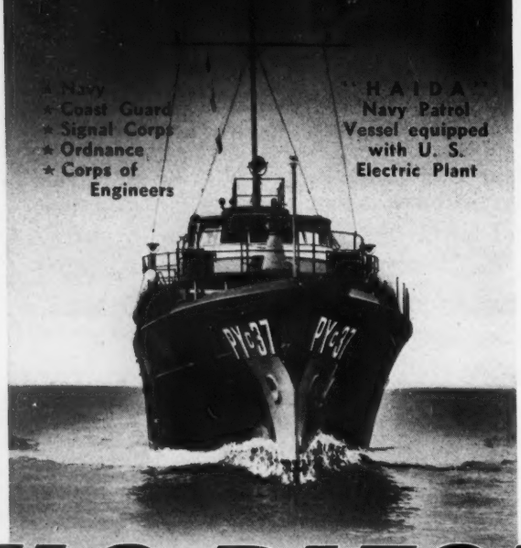
"HAIDA"
Navy Patrol Vessel equipped with U. S. Electric Plant



U.S. DIESEL
MARINE ELECTRIC PLANTS

forced by a butt strap as shown. If difficulty is experienced in working in the compound curvature, two or three shallow saw kerfs (not deeper than one-third the thickness of the plywood) may be cut inside, in a fore and aft direction, to relieve the stress. These kerfs should be well filled with waterproof glue when the plank is finally fitted to the frames.

To gain as much headroom as possible in the cabin, its roof has been constructed without deck beams. The cabin top is made of two thicknesses of ¼" fir plywood which have been bent over a temporary form built to correspond with the curvature of the roof, the layers of plywood being then securely glued together with waterproof glue. It would probably be advisable to lay these plies diagonally, at right angles to each other, for additional strength. The center of the span of the cabin top is supported on two uprights; one the brass pipe through which the centerboard pennant is rove and the other a wooden stanchion terminating in a fore and aft carline which, without interfering with headroom, will add greatly to the rigidity of the roof. Hatches have been purposely omitted in an effort to secure a cabin top that will not leak. I feel, however, that if the boat were intended for southern use, I would work a square hatch in at the forward end of the house for additional ventilation. The cover of this hatch could be tipped either forward or aft as desired.

Both the seats and the floor in the cockpit drain aft through scuppers in the transom. In a following sea, it may be necessary to plug the lower ones with corks but ordinarily they should give no trouble. All joints in the way of the flush hatches and the hinged covers in the seats are to be provided with proper gutters and drains to carry off rainwater. If this work is well done, the boat should be as tight as a bottle, as all her other seams, both above and below water, are to be securely screw fastened on 3" centers and also set in waterproof glue. This makes for a tight hull and a rigid one while keeping weight to a minimum.

THERE will be a couple of thousand pounds of inside ballast so that she will be able to take it and should, under ordinary conditions, sail on her bottom and not on her beam ends, which is what a cruising boat ought to do. Washing water will be carried in a 10-gallon tank under the bridge deck and melted ice also will be utilized for this purpose. Drinking water will be carried in glass gallon jugs, proper racks for which will be provided. Lighting will be by kerosene lamps. There will be no sink but a rectangular, white enamelled dishpan will be fitted in the dresser to port in such a way that it can be easily removed for dumping overboard. As I am opposed to all unnecessary below water openings in a hull, the toilet will be of a simple type such as the chemical ones sold by the mail order houses, requiring no outboard connections. The motor will be a 3 hp. reduction gear, air cooled engine, fitted with a reverse gear. The propeller will be two bladed, 12" diameter, and ought to kick her along at about five knots in smooth water.

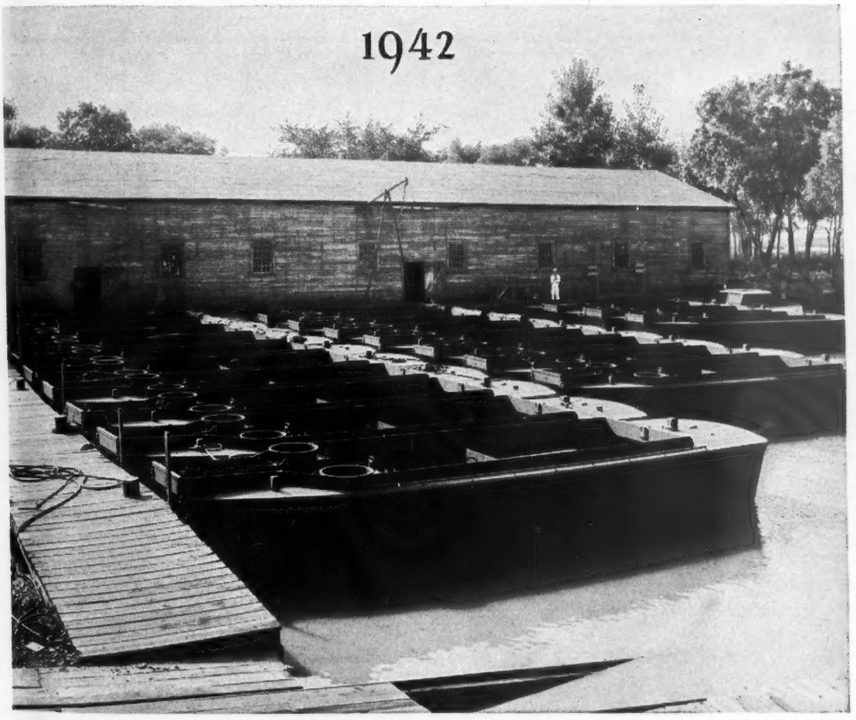
The manufacturers of plywood recommend the use of a special plywood primer to seal the pores and the end grain of the wood. There are several excellent products of this kind on the market, any of which is suitable for the purpose. This primer should certainly be applied before the paint goes on. In an effort to get enough room below in such a small boat, it is difficult to escape the chunky look that most of us object to, so a little harmless deception may be resorted to. Perhaps it might be called camouflage. In any event, it is a well known optical phenomenon that, by simply accenting certain lines, the illusion of length can be created. In the case of this little boat, the desired effect is gained by the simple device of dividing her topsides into three fore and aft areas of different colors, as indicated in the sail plan. From the rail cap to the sheerstrake should be painted a soft, inconspicuous shade of, perhaps, a bluish-green, toned down with a good deal of gray. It may be any other shade that suits your fancy as long as it tends to merge with the sky and sea background.

THE topsides proper may be painted any color that strikes your fancy; personally, I like a semi-flat white, as it is the easiest paint that I have discovered to keep looking well. It is easy to touch up if necessary and, with a boat that will probably be brought alongside of docks and floats, this is likely to be necessary from time to time; it will not fade and, if scrubbed occasionally, will retain its pristine beauty for a long time. Another advantage of this paint is that it tends to scrub off slowly, never needs burning off, as a gloss finish does, and, with a light sanding, is ready to receive another coat at any time. To continue the illusion of length versus height, it is advisable to carry the water line up somewhat higher than normal and to curve it upwards slightly at the ends. If a narrow boot-top were painted above it, the illusion would be further carried out.

Of course, a little boat like this requires no dinghy as she can come alongside any dock and tie up while the owner goes ashore. She can sail in shallow water, such as is found on many of our rivers and lakes, and yet should be a good little sea boat in deep water. A man, his wife and two youngsters could spend many a happy week-end aboard, with more comfort than camping provides, and more thrills. It is hard to know what she will cost in a post-war world, but it is my guess that if owner-built she should come to somewhere about $600 complete and ready to sail.

Above—a group of 110-foot Sub-Chasers lined up in the company's basin in 1917. These ships played a major role in World War 1.

Below—a fleet of 36-foot Landing Boats in the company's basin in 1942. These boats are of prime importance wherever soldiers, sailors or marines establish a beachhead.



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Today we are constructing boats for you to fight with so that later you may cruise and sail in our pleasure craft.

This is part of our production for the Army, Navy and Coast Guard. These are 40-foot Army work boats, adapted from the Navy's famous motor sailers.

Palmer Scott & Co., Inc.
NEW BEDFORD, MASSACHUSETTS

TILLERS FOR THE TEENS

(Continued from page 48)

fish race. In this, each boat sails to a designated spot and must have aboard an eight-inch denizen before being allowed to up anchor and race for the starting line. The annual Inspection Trophy every spring finds the fleet as it never looked before — nor, it must be confessed, since. Most boats are overhauled by the boys themselves. On "M" day, everything is in perfect shape. Unlike adult skippers, Starlet crew and captain also are scrubbed and overhauled.

The boys keep outgrowing their boats but younger brothers are always coming along. Many of the original owners now race Stars and PC sloops and attain outstanding results. Meanwhile, the fleet is growing more active each year. And if the turbulent 'teen-age offspring are growing more active, no matter. Sailing is a safety valve for the most tempestuous typhoon.

MUTINY IN THE "AMISTAD"

(Continued from page 44)

with shouts of joy. The white men took fright and ran back to their wagons after their guns, but the blacks soon convinced them that they were friendly. They insisted upon shaking hands and presented them with their own guns (of which they had two), a knife, a hat, and a handkerchief.

The parley lasted about four hours. Captain Green made them understand that there was a vessel of war in pursuit of them, as indeed there was. Would he, they asked, come aboard the schooner and steer them to Sierra Leone? They would pay him richly in gold. Captain Green led them to believe that he would and they agreed to let him take the *Amistad* around to another part of the island, from which they would start for Sierra Leone.

At this point the Coast Survey brig *Washington* sighted the black schooner. Her commander thought she was ashore or in distress. A boat's crew was sent to her assistance and found only Negroes on deck, menacingly armed with cane knives. The boarding officer sprang into the rigging and, drawing his pistol, ordered the blacks below. Montez and Ruiz threw themselves on the officer and claimed his protection and the two Spaniards were welcomed aboard the *Washington*.

THE Negroes on the beach fell on their knees for protection before Captain Green, who had assured them that this was a free country. They were captured without resistance by an officer from the brig, after a shot was fired over their heads.

Cinque was not taken so easily. He burst suddenly from the *Amistad's* cabin, where he had fastened a money belt full of doubloons about his waist, and leaped overboard with the two dogs. A boat from the *Washington* gave chase. The crew spent a wearing three-quarters of an hour rowing back and forth after the indomitable mutineer, who swam under water — or so the sailors swore — for five minutes at a time and reappeared a hundred yards away.

Finally Cinque saw that it was useless and, surrendering, was taken back aboard the *Amistad*. The other negroes gathered around him and he made an address in his own tongue which seemed to move them deeply. Antonio, the cabin boy, translated the speech for a newspaper editor from New London, who rendered it as follows:

"Friends and Brothers: We would have returned, but the sun was against us. I would not see you serve the white man. So I induced you to help me kill the Captain. I thought I should be killed. I expected it. It would have been better. You had better be killed than live many moons in misery. I shall be hanged, I think every day. But this does not pain me. I could die happy if by dying I could save so many of my brothers from the bondage of the white men." *

A PRIZE crew was left to guard the *Amistad* and her captive blacks but Lieutenant Gedney thought it wiser to place Cinque in handcuffs and take him aboard the *Washington*. The big Negro, who showed no sign of emotion, bore himself with a dignity which commanded the admiration of the brig's officers.

The *Amistad's* papers were produced and the Spaniards told their story of the mutiny, Lieutenant Meade interpreting for Montez. They laid formal charges of murder and piracy against Cinque and the 37 remaining adult Negroes. Also, they claimed the slaves as their property, Ruiz representing himself as the owner of the grown blacks and Montez claiming the four children, to whom he assigned a valuation of $1,300. No one, for the moment, claimed young Antonio, who had belonged to the late Captain Ferrer.

The next morning Cinque persuaded his guards, by signs and gestures,

* *New York Sun, August 31, 1839.*

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Photos, courtesy of Chris-Craft Corp.

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You may have a similar type of job to this one in your plant . . . a non-ferrous assembly—part of a larger unit—that has to be delivered right in every detail—right on a tough schedule.

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that he could show them where a handkerchief full of doubloons was hidden if they would return him aboard the *Amistad*. Accordingly his fetters were removed and he was rowed across to the schooner, under strong guard. He was received with joyful cries by the Negroes and once more addressed them with great earnestness, often glancing while he spoke at the sailors in charge.

"My brothers, I am once more among you, having deceived the enemy of our race by saying that I had doubloons. I come to tell you that you have only one chance for death, and none for liberty. I am sure you prefer death, as I do. You can, by killing the white men now on board — and I will help you — make the people here kill you. It is better for you to die thus, and then you will not only avert bondage for yourselves, but prevent the entailment of unnumbered wrongs on your children. Come! Come with me, then!"

HERE his dusky audience showed signs of such excitement, yelling and leaping about and seeming about to turn upon their captors, that Cinque was overpowered and put in irons aboard the *Washington*. The slaves were put aboard a sloop and taken to New Haven, where they were lodged in the county jail to await trial at the next circuit court upon charges of murder and piracy. The *Washington* peacefully escorted her prize to New London, where a United States Marshal and a judge from New Haven came aboard to hold a court of inquiry.

\+ + +

THE voyage of the *Amistad* was ended. The Amistad Case, celebrated in the annals of international law, had begun. It was destined to drag on for another two years and to play a measurable part in setting fire to the anti-slavery sentiments which culminated in the Civil War.

The strange story of the *Amistad* and the plight of the Negro captives attracted vast public interest. An Amistad Committee was formed and anti-slavery philanthropists contributed funds for their defense. So general was the curiosity that a shilling was charged for admission to the jail and the money was spent on providing extra comforts for the captives. The Government gave them clothing, which seemed to please them a good deal, and the little girls spent happy hours twisting their new shawls into turbans. On fine days, the Negroes were taken to the Green for exercise, their antics affording great amusement to the public. Professor Gibbs, of the Yale Divinity School, elicited their stories and Professor Day, aided by students from the school, undertook the task of teaching them English and imparting "the plain and important truths of Christianity."

CHARGES of murder and piracy, brought against the captives by Ruiz and Montez, were pending in the Circuit Court, where writs of *habeas corpus* in behalf of all the Africans had been applied for. Ruiz and Montez asked that the slaves, as their legal property, be restored to them or to the Spanish Government. The Spanish minister presented through the State Department a claim for the delivery of the *Amistad* and her cargo and the slaves, and this claim was presented to the District Court in behalf of the United States.

Meanwhile, Montez and Ruiz, unable to raise $1000 bail, were held in jail in New York, charged by Cinque and Fuli-wa, and their abolitionist friends, with assault and battery and false arrest. Lieutenants Gedney and Meade, of the *Washington*, brought suit in admiralty against the *Amistad* and her cargo, claiming to have rescued the schooner and slaves for the benefit of their owners and asking salvage in behalf of themselves and their crew. Captain Green and his Long Island neighbors also filed claims for salvage.

The case came to trial in January, 1840, and the hearing lasted about a week. The court refused to consider the charges of murder and piracy, holding that acts committed on the high seas aboard a vessel of foreign registry did not come under its jurisdiction.

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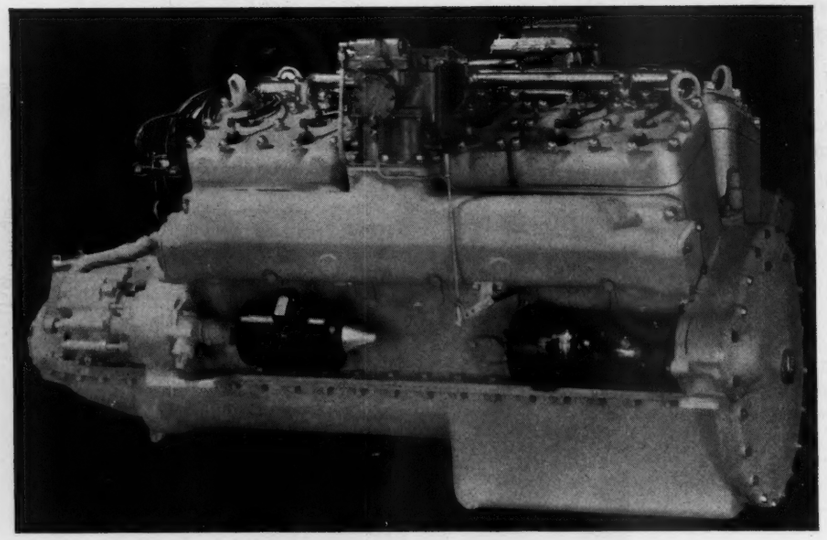

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The officers of the *Washington* were held entitled to salvage on the vessel and cargo, but not on the slaves. For the Negroes, even if they were slaves, had no value in Connecticut. It was also adjudged that Green and the other landsmen had done nothing for which they could claim compensation. Accordingly, the *Amistad* and her cargo, appraised at about $40,000, were ordered sold to satisfy the claims of the salvors.

So far as the slaves were concerned, their status depended upon the date of their enslavement. If they were in fact *ladinos*, as the *Amistad's* papers described them — that is, if they had been in slavery before 1820, when the slave trade was outlawed by international treaty — then they belonged to Montez and Ruiz. If they had been illegally sold into slavery after that date, then they were free men even by the laws of Spain itself.

On this point the stories told by the slaves were entirely consistent and circumstantial. Most of them, like Cinque, were victims of kidnaping, apparently a well-developed West African industry. Two or three had been convicted of sexual offenses and sold away from their native villages. One of the little girls, Te-me, had been stolen by a party of men who broke into her house at night and made off with her mother, her brother, and herself. The other two little girls had been pledged by their families as security for loans and were seized in foreclosure. The full-grown Pung-wu-ni deposed that his maternal uncle had exchanged him for a coat.

They had all been brought to Cuba in the Portuguese slave ship *Teçora*, kept in the barracoons there for about ten days, and shipped out in the *Amistad* by their new owners, who paid the customary bribe to the authorities in Havana and assigned them Spanish names in the ship's papers.

The court therefore decided that only the boy Antonio was a born slave and lawful property of the late Captain Ferrer. He was to be returned to Cuba and the custody of Captain Ferrer's widow. The other captives were free men, illegally held in slavery. They should be delivered to the President of the United States "to be by him transported back to Africa."

\+ + +

This was a disappointing decision, both to the President of the United States (the pro-slavery Van Buren) and to the Attorney General, Felix Grundy, of Tennessee.

The administration had hoped for a verdict in favor of the Spanish owners and had gone to the extraordinary length of sending the schooner *Grampus*, under the command of Lieutenant Paine, to New Haven. Paine had orders to lie at anchor off the port and await the court's decision. If the captives were held to be slaves, they were to be put aboard the *Grampus* and sent to Havana before an appeal could be taken. The Government appealed to the Circuit Court, which in April, 1840, sustained the decision of the District Court. A final appeal to the Supreme Court was decided upon and John Quincy Adams, "the old man eloquent," was engaged to defend the Negroes.

The Amistad Case opened before the Supreme Court in February, 1841. The decision, handed down on March 9th, sustained the judgment of the lower courts. The *Amistad* captives were free men. The marshal drove out immediately to Westville, where the prisoners had been moved because of the demolition of the old jail.

"The big court," he told them, "say you all free. No slaves. Here it is in this paper. Read it."

Cinque, with a dignity he had never lost, answered for his men. "We glad. We thank the American men." He instructed Ka-li to read the paper aloud, so that all might hear it, but added thoughtfully, "Paper lie sometimes."

The Amistad Committee made new appeals for subscriptions and a party of the now celebrated Negroes were taken around the country on a sort of vaudeville tour to raise money for their return to Africa. By 1842, the survivors of the *Amistad* mutiny had been landed in their own country, accompanied by two Christian missionaries. Cinque went back to the rice fields he had longed for so desperately, but his adventures seemed to have unsettled him for his old way of life. He drifted back to the Mendi Mission, made himself useful as an interpreter, and remained there until his death in 1879.

No appeal was taken in the case of Antonio, who had been ordered restored to the Spanish authorities. The boy declared himself willing to return to his widowed mistress in Cuba, but he was held as a witness until the final disposition of the Amistad Case. After that, he disappeared in New York, undoubtedly with the aid of abolitionist friends, and no serious effort was made to recapture him.

Don José Ruiz and Don Pedro Montez emerged with nothing but their lives. The Spanish Government spent the next seventeen years vainly trying to collect indemnity in the Amistad Case. The last bill providing for such indemnity died among unfinished business at the close of the first session of the thirty-fifth Congress, May 20th, 1858.

The End

"We did it before..."

EVER hear about our first taste of Jap treachery? It wasn't the *Panay,* or Pearl Harbor. It happened way back in the Civil War... while the *U.S.S. Wyoming* was on Asiatic patrol.

We were at peace with the Mikado. So, without warning, the Japs attacked our unsupported *Wyoming.* Sounds familiar, doesn't it? Well, even more familiar is the reception they got. Some U.S. Marines were on board and they sent the little yellow men scurrying back to their islands. What's more, the Leathernecks captured three Jap vessels just to make the lesson stick.

Today, we're repeating that lesson for the Jap's benefit... and yachtsmen have a special chance to help. Offer your boat or your services to the Navy or Coast Guard. Ask about the U. S. Coast Guard Temporary Reserve, and keep your boat and equipment shipshape. Obey the rules for war-time operation of private craft... and stand by to answer Old Glory's call.

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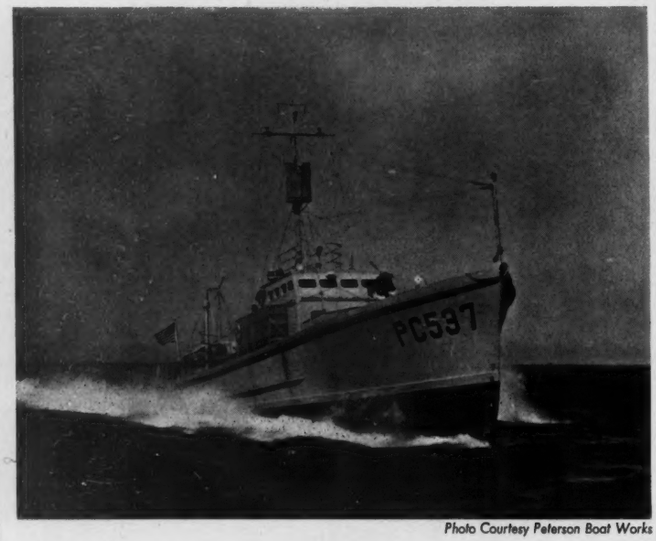

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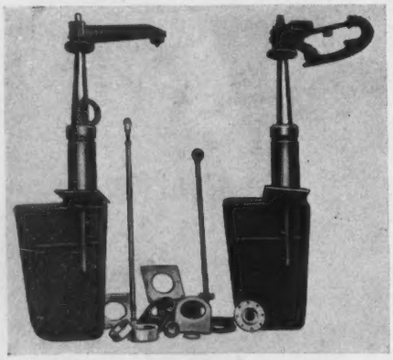

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NEW LAMPS FOR OLD

(Continued from page 29)

they were almost entirely neglected. This failure to grasp an opportunity compares with the neglect accorded Sir Isaac Newton's drawings of a mirror sextant. His idea would have put in the hands of a mariner an instrument that was sorely needed but his ideas were overlooked, possibly because his other ideas seemed so much more important, and not until fifty years later was Hadley's quadrant accepted by the seafaring nations as the great boon it was to those who sailed the sea.

SINCE the first tables of Ogura and Aquino, many short cuts have been produced. At present, the Hydrographic Office publication No. 214 seems to me to be the most labor saving, although a number of large volumes are required if you wish to sail in all latitudes. The British have tried to improve on H.O. 214 and I was given a volume of these tables for criticism. In my opinion, their work goes too far as it requires fourteen volumes to sail the world. When you consider that much of the time in working navigational problems is consumed in turning pages, you can see that, with the English work, you might lose time, in a fast moving plane, finding the right book. With the same objective of shortening the paper and pencil games played by the sailors, governments have been attempting to produce an almanac from which the required quantities could be picked with the greatest ease. Our "Air Almanac" certainly simplifies one phase of the navigator's duties, my only criticism of it being that, as it is printed to cover a three months' period only, a sea captain on a long journey might run out of information when he was making for home and needed it most.

To illustrate the changes in the methods of navigation, I wish to point out that the space devoted to lunars is now entirely superfluous. The Phi prime Phi second sight is, and long has been, obsolete although some pig-headed gentlemen still insist on putting it in some standard works. The time sight is obsolete. For this statement I can quote Dutton who, in this instance, is directly at variance with Bowditch. With the modern almanacs it is quite unnecessary to teach the equation of time or the right ascension of the mean sun. These are usually taught but for what other reason than to torture the students, I do not know.

THERE is one other very broad subject that is developing at so rapid a speed that each class has to be taught differently from the one preceding because of the additional knowledge gained from day to day. That subject is meteorology. It concerns matters of prime importance to every living organism, from the grain in the fields of Kansas to the storm-tossed mariner off Cape Horn. A hundred years or more ago there were many rules of thumb, quaint sayings in regard to the weather. Some of them were wrong any way you looked at them and others had only local application. The note of speed in modern life has come from many sources, notably from the airplane. The need for more scientific approach to the phenomena of weather derives from this and real progress, both in short time and in long time weather forecasting, has been made. To go into this subject further would require the whole of a big book, with copious illustrations. A flood of such books is now obtainable.

FINALLY, however, I wish to explode the big bomb shell. In H.O. No. 216, published for the use of airplane navigators and published by instructors at Pensacola School, a meridian altitude is not even mentioned. The main reliance of the great navigators of the days of discovery, the keystone to the Arch of Triumph of the seaman, neglected and swept into oblivion! And, of course, with the abolition of the noon sight goes the ex-meridian sight and calculation of the noon interval. With the omission of the pages covering the subjects I have just referred to, what is left in your manual? Line of position is the basis of your work. Sumner's name is as indelibly placed on the pages recording the great Americans who have helped to develop the science of the sea as the names of Nathaniel Bowditch and Matthew Fontaine Maury.

The widespread use of position plotting sheets has led to graphic methods in connection with keeping a running picture of dead reckoning positions and, although the tables for finding courses and distances are still contained in standard works, I note an ever increasing tendency to graphic methods in this connection. Incidentally, a good pencil sharpener is an important piece of chart room equipment. You see, we have perfected many appliances to deal with our modern problems but along comes a torpedo and sends us back to the days of Columbus, or even to the days of Archimedes. In an open boat (probably, but not certainly, with a compass), but with nothing else but our brains and ingenuity, what can we do?

It is not a difficult trick to manufacture a cross staff of the type used by the Elizabethans and, with this, it is possible to get the approximate meridian altitudes of the sun and approximate altitudes of the pole star. With the sun, it must be remembered that the declination is zero on the twenty-first of March and September and is about twenty-three and a

"This is the Spirit that will Win the War!"

"WELL DONE" Says the Navy

". . . After careful consideration the Navy Production Board has granted your company a renewal of your award for an additional six months' period dating from August, 1942. Further, as evidence of continued outstanding service in time of war, a white star may be added to the pennant, indicating the renewal of the award . . .

". . . On behalf of the Under Secretary of the Navy, I congratulate every man and woman of the Gibbs Gas Engine Company on their patriotic achievement. This Production Award is not lightly bestowed in the first instance; the requirements for renewal are equally exacting. By being selected for this honor a second time you have demonstrated that yours is no half-hearted flash-in-the-pan effort, but rather a solid determination to supply the navy with the materials it must have to carry the engagement to the enemy. That's the spirit that has made the nation what it is today. It is the spirit that will win this war".

Sincerely yours
H. A. Wiley,
Admiral, USN (Ret.)
Chairman, Navy Board
for Production Awards

It takes fighting spirit to send fighting ships down the ways so fast and so efficiently that an Army-Navy "E" rewards the accomplishment!

We were proud of our first Navy "E". We are proud of our present Army-Navy "E". But above all we are proud of our men and the spirit that sends an unbroken stream of GIBBS minesweepers and patrol craft out to clear the high seas of enemy danger . . . and harbor and sea-going tugs to work with urgent shipping.

GIBBS is a name to remember because it represents an organization of seasoned shipbuilders who have served their country well during two wars . . . who maintained the highest traditions of craftsmanship and service during peace times.

When victory comes the GIBBS organization and the GIBBS facilities will again be available to private owners for the construction and repair of wooden and metal vessels of large and small size. And, in addition, GIBBS trade-marked pleasure and work boats embodying all of our high skill and extensive knowledge and experience will once more appear on the market.

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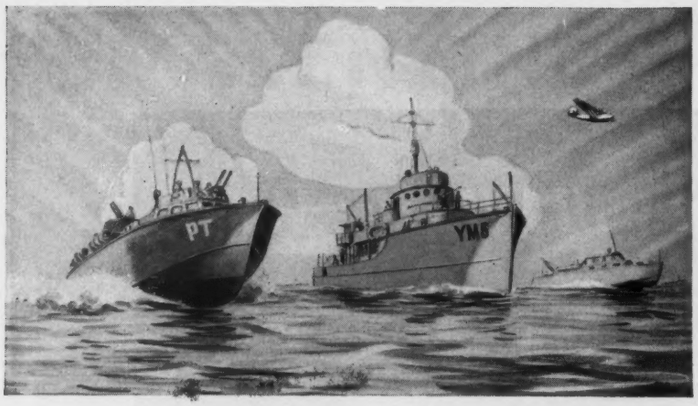
GIBBS



The Gauge of Victory . . .

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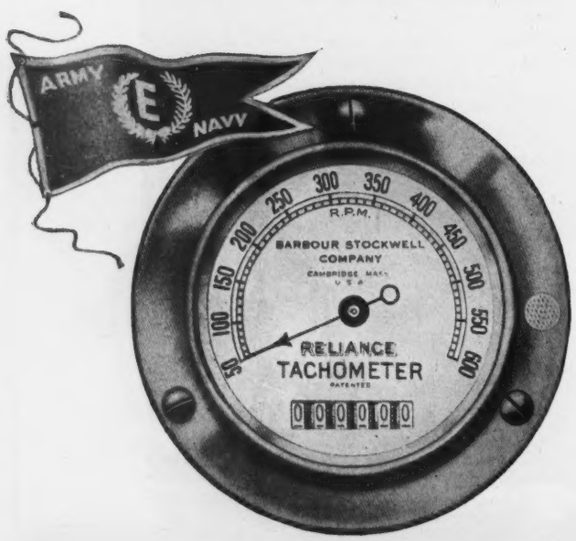
The success of a naval operation depends upon each boat's efficiency in carrying out its assignment, and that in turn depends upon such an important detail as perfect timing — based on an accurate reading of engine efficiency.

On all the seven seas, in many types of war craft, Reliance Tachometers are getting fighting men to battle on time.

There's stamina in a Reliance Tachometer — endurance that safeguards accuracy for the gruelling punishment of continuous use. Its tough dependability is attested by shipyards and engine builders everywhere who are installing this old reliable product of the Barbour Stockwell Company.



BARBOUR STOCKWELL COMPANY
CAMBRIDGE, MASSACHUSETTS

half degrees (twenty-four is close enough for our present purposes) on the twenty-first of June and December. We can find approximate latitudes, and, by sailing north or south, arrive at the latitude of a friendly port and then follow this latitude along until that friendly port is reached. Of course, it is assumed that you remember the latitude of some haven of refuge and that you can tell east from west in a general way.

It is apparent that, in the last forty-odd years, ingenuity has been constantly at work with the laudable ambition of easing the labors of the busy men who command our boats but, as is so often the case, simplification and complication are at times almost indistinguishable. Anyone who looks into the "innards" of a gyro compass and then at an old-fashioned magnetic compass might have difficulty in making up his mind which was the simple and which was the complicated mechanism. However, the work that has been done in order to assist the practiced navigator has, in many respects, also simplified the teaching of the novice. When I was in college, Professor Huntington was struggling with the differential equations required to describe the motions and forces of a gyroscope. It was not, however, until almost fifteen years later that these equations were put under control so that they yielded the desired information. In the text book used in Annapolis in 1911, by Muir, there is no mention of the gyroscope.

For one who wishes simply to be able to work a line of position problem without knowing the meaning of the formulas he is working with, modern methods can be taught in a few lectures and mastered by one who knows nothing more complicated than simple addition and subtraction of ordinary numbers and of degrees, minutes and seconds. The mechanical operation of taking correct sights can be learned only in practice but even in this operation one additional improvement has been devised for the convenience of the sailorman. Most modern sextants have a micrometer screw instead of the vernier, which makes reading the altitude much simpler. The modern Navy sextant has the arc and the micrometer screw black with white demarcations, and this makes the reading at dawn and twilight, at which time most star sights are taken, much simpler. And simplicity is a potent method of reducing errors.

What is in store for the future would be an interesting speculation. All I can offer in this respect is to quote the words of Joseph Louis Lagrange, to my mind the greatest mathematician of the eighteenth century, who, whenever he was asked any question, always replied: "I do not know."

WHERE THEY LEARN TO SOCK SUBS

(Continued from page 22)

and training ashore. Hour after hour, the trainees sit and read messages transmitted by blinking lights or flags. They work in teams, running up flag signals on the hoists located at either end of the long pier.

"How deep is the water?" "Are there any objects below the surface?" Two most important questions when operating a boat in a war zone. The combined efforts of science and the training of the SCTC make the answers to those questions quickly available. That's the job of the soundman. Trained in the use of modern sounding equipment, he sends out a sound wave and waits for it to "bounce back." From the elapsed time, he can tell how deep the water is at the particular point. Other equipment will tell him if a submarine is lurking in the sea lane waiting for a merchantman to come by. It is the same principle of sound echo that discloses the position of the raider and that information can be capitalized to liquidate the menace.

Classes in the school teach these men the correct way to use the modern equipment and the whole operation of the sub-chaser depends upon competent handling of the equipment by the soundmen. All the information gathered and distributed by the radiomen, signalmen and soundmen goes toward determining the operation of the sub-chaser. To the quartermasters go the orders from the officers. Theirs is the duty to execute.

Training in the Sub-chaser School includes: compass reading, steering, compass corrections, chart corrections and the fine points of ship handling.

In the quartermaster school are artists and flagmakers. All the flags for the ships are turned out and special flags for use of the Seventh Naval District Headquarters have come from the school. The artists are kept busy preparing charts, cartoons and other visual education media. The entire Sub-chaser School is "plastered" with posters calling the attention of the men to the need of silence regarding ship movements, necessity of destroying the Navy's confidential code whenever it is in danger of falling into enemy hands, or other moral or educational subjects.

There's a group of 125 men at the Submarine Chaser Training Center, that, under ordinary circumstances, would be lost in the milling thousands of fighting men that march through the school daily. But these men are different. They stand out as a credit to the Navy no matter where they are stationed.

To the U. S. Coast Guard Auxiliary Patrol

THIS IS A SALUTE to those peacetime yachtsmen who have volunteered for wartime patrol. The boats which formerly nosed through sparkling waters in search of adventure are now in search of trouble. Their masters, thoroughly familiar with our coves and inlets, are turning their unique knowledge and skill to the defense of our nation. All praise to the members of the U. S. Coast Guard Auxiliary for their time and effort freely contributed and for their very tangible assistance to our regular armed forces.

Chubb & Son offers its extensive inspection facilities, not to the Auxiliary Patrol alone, but to all boat owners, that they may be in a better position to render an efficient service should the need arise. Even if there is small likelihood that your craft will be pressed into service, you have a wartime obligation to care for it properly. Chubb inspections are valuable, they're complete, and they're free! Inquire about them today.

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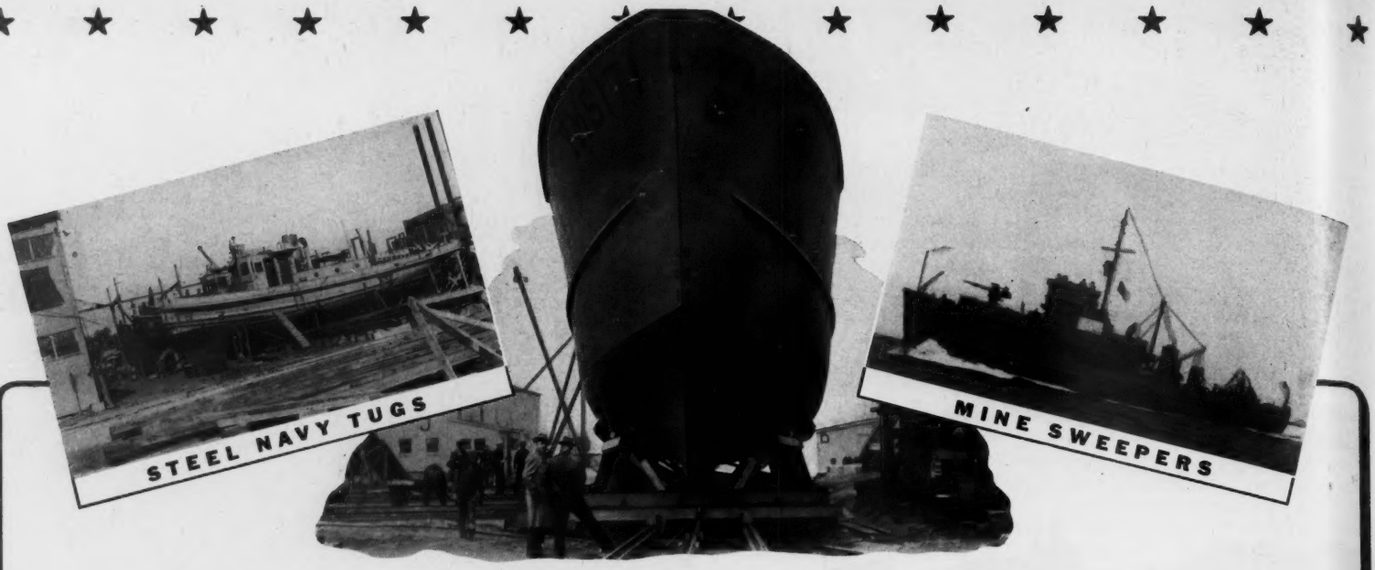


We're Proud Of Our Navy!

On 100% production for the Navy now. Today, as in World War I, we are contributing all our facilities to hasten the day when Victory shall be attained. When that day comes, our greatly expanded yard and shop facilities will again be placed at your disposal and GREBE craft will resume their position of supremacy in the boating industry, just the same as before.

GREBE

HENRY C. GREBE CO., Inc. *3250 N. Washtenaw Ave., Chicago, Ill.*

You would see them many times if you were to walk past the hotels that house the trainees of the school. In the shadows of the dimout, you would see their forms and notice their guns. You would see them with the rain pouring down their faces, with the sun beating down in all its sub-tropic relentlessness. They're tough, plenty tough, and well drilled, too. But you've seen only a small part of their work unless you've seen them manning their stations inside the gates of the SCTC. There they have a big job to do. To them is entrusted the security of the institution and all its properties. Theirs is the responsibility of protecting the buildings, the men, the equipment, regardless of the nature of the emergency.

They're specialists, specialists at "giving 'em hell." They'll fight anything — fires, riots, attacks, gas, sabotage. You name it and they'll fight it. It's not just happenstance that these particular men are assigned to the Seaman Guard. It's because experienced Navy men have seen in them the qualities that go toward making them the specialists they are. But it does not stop there. Their instructors have developed their natural abilities and their fortitude and willingness have kept them in the unit. Not all men stay in when once assigned. Occasionally, a few are found unfit for the job but, by and large, almost all make the grade.

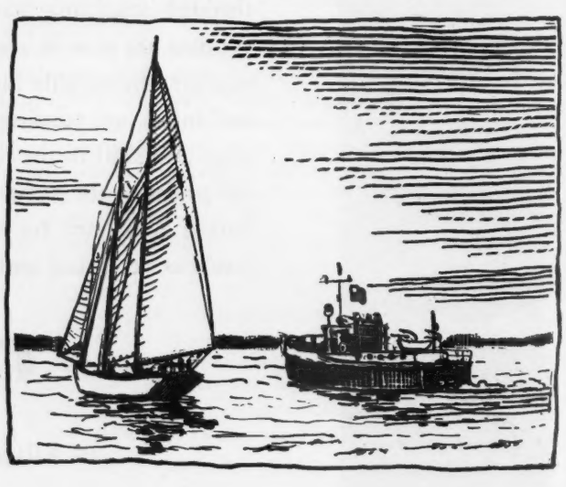
TWENTY-SIX officers and about 70 enlisted men, all experienced men of the Brazilian Navy, are in training at the School learning that, while American coffee is "too weak," American enemy hunting tactics are strong. Not novices at naval warfare are these good neighbors from coffeeland who are eagerly taking in all the specialized information that will spell doom for the "rattlesnakes of the Atlantic." The officers all are graduates of the Naval Academy at Rio de Janeiro. The enlisted men have all been to sea, some for as long as thirty years. The trainees are members of the Brazilian Naval Mission to Miami, headed by Commander Harold Rumeb Cox.

Intensive schooling in the United States Navy's technique of dealing with submarines is being given members of the mission and they will return to their home waters well versed in the American methods and capable of fighting with the fullest degree of coöperation in event of a combined action against the common enemy. Efforts are being made throughout the course to assure the utmost coördination of activities. The Brazilians are being schooled at an institution that in reality is a practical university.

The waterfront school is divided into several "colleges" and each turns out masters in the science of sinking submarines. Each "college" offers some theory, of course, but only as much theory as is necessary. The rest of the instruction is concentrated on the practical side of sub sinking. Because of the wide experience of the trainees, the elementary aspects of the usual program are being omitted and concentrated efforts are put on the phases that pertain directly to anti-submarine warfare.

ALL the facilities of this unique school are being made available for the South Americans. Every branch is contributing some specialized information to the United States' allies. No detail which will make for complete coördination is being overlooked. For instance, the signal school is taking pains to make sure that all the men from Brazil who are charged with receiving and transmitting messages by visual signals are thoroughly versed in all the American systems. After their training, they will be able to receive messages despite the fact that they may not understand them. The officers are acquiring smoother command of the English language.

The Americans are turning over to the Brazilians the working methods of the "attack teacher," a device for locating submarines and delivering the lethal punch. Crewmen and officers alike are using American guns and becoming familiar with the American depth charges. And, what is probably more important, they are getting ample opportunity to go to sea in the PC boats which will be identical with the ones the United States will deliver to Brazil to fight raiders on the supply routes of the southern continent.



MOROCCO MORNING

Among those present that memorable dawn of Sunday, November 8 were ▬▬* sturdy landing boats built by Richardson. From Algiers, to Guadalcanal, to the bleak Aleutians, you'll find the products of Richardson skill and experience carrying our fighting cargo in the greatest amphibious war of all history.

It seems a long time since we built pleasure boats, but you can be assured that Richardson craftsmen are keeping in trim. Yes, and perhaps dreaming up a thing or two that will bring yachtsmen a better cruiser tomorrow when the peace is won.

*Military Secret.

This 36' Landing Boat is one of several types of fighting craft being built by Richardson.

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CRUISERS *for Peace time*
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Rigged for WAR!

. . . with skills born of 50 years boat building craftsmanship

Building your favorite class racer may be over for the duration. Still we're proud that our fifty years' experience of building the finest small boats is permitting us to play an important part in the development and production of many vital war products.

The skill and knowledge which produced Skaneateles fine light weight hulls and rigs is now employed in experimental projects for the Army, Navy and the Air Corps. Many of these products are now in quantity production by ourselves and others, and their variety ranges all the way from pontoon and attack boats to glider and plane parts.

The Skaneateles Hydrolite process of making moulded plywood hulls, shapes and structures is playing an important part in the development of these new war products. When this war job is done and we return to our chosen field and our old friends, obviously we will bring to our work many new techniques, materials and skills which mean Skaneateles boats will be even finer and more advanced than they have been for the past 50 years.

SKANEATELES BOATS, INC.

Fine Boats for Fifty Years

Skaneateles, N. Y.

WEATHER ELEMENTS

By Thomas A. Blair

(Prentice-Hall, Inc., New York, $5.00)

▶ This is a revised edition of the author's popular book, first published five years ago. It has been carefully edited to keep it in step with the continuous progress of meteorology and to introduce the newer ideas and practices caused by that progress. It presents an introduction to the science and a study of it should enable the reader to gain an understanding of the physical processes underlying the observed weather phenomena.

It takes the reader step by step through the elements of the subject, leading him on to weather forecasting and a consideration of world weather. It is well illustrated and should repay study. C. H. H.

SAILING TO THE SUN

By Howard Bloomfield

(Dodd, Mead & Company, New York, $3.00)

▶ An editor quits his job and, with his wife and baby son, sets sail for Florida in a 30 foot auxiliary sloop. The course is outside to Manasquan Inlet and thence south through the Intracoastal Waterway. The furthest south was Key Largo, reached after a most leisurely cruise with the usual number of groundings. Thence the voyagers headed back north. They made many friends along the way and visited a number of harbors, spending weeks in the ones which most appealed to them.

It is a well written tale of a long cruise, with sidelights on housekeeping afloat with a woman, a small child and a dog; of fishing along the way; of warm days and nights spent in attractive ports; of fair weather and foul. And all through it runs the feeling of relief from desk work and fixed office hours though the author did a lot of writing along the way, besides sailing the boat and keeping her in shipshape condition.

Many an office worker has cherished the thought that some day he would break his chains and shove off on a long, leisurely cruise, away from snow and sleet and cold weather. Few have really had the nerve to do it and fewer still, if any, have written about it. When this reviewer looks out on the icy streets of this snowy city, he wishes that he too could follow Skipper Bloomfield in Sailing to the Sun. C. H. H.

QUEEN OF THE FLAT TOPS

By Stanley Johnston

(E. P. Dutton & Co., Inc., New York $3.00)

▶ Although this eye witness story of the first "naval" battle ever fought in the air has been a best seller since its publication a month or so ago, it has yet but tapped its potential audience. In a word, anyone concerned with the aeronautical aspects of naval operations will find within its pages more documentary evidence regarding the surface ship-airplane controversy than a deckload of senatorial documents.

The author is a well-known newspaperman, and has the eye for detail and circumstantial evidence which is a characteristic of an experienced reporter. As a result, the book is packed with the many incidents, both major and minor, which cumulatively compose the day to day operations of a large airplane carrier.

The core of the story is the account of the now immortal battle of the Coral Sea, a "knock-down-and-drag-out" action which, though a notable victory for our naval forces, saw the destruction of the *Lexington* as well as other units of our fleet. This battle was the turning point in our war with Japan, and "Queen of the Flat Tops" provides the evidence.

Johnston was all over the ship, among the wounded, dying and fighting men, throughout the entire battle. He witnessed deeds of valor as thrilling as anything in American history. His knowledge of men, ships and tactics, his ability to make you see vividly what he himself saw, make his story an epic of observation under fire unequalled to date. C.R.

POWER GEARED TO ATTACK

JOES REVERSE and REDUCTION GEARS

WITH motors muffled and gears driving quietly, gray death streaks over the waves to sink an unsuspecting enemy ship. Engine builder and gear manufacturer in cooperation achieved the best results in smooth power transmission in P.T. Boats and other Navy craft.

More than twenty types of Navy and Army craft in thousands of installations depend on Joes Gears. Boat builders say that Joes Gears are the one piece of equipment which never give trouble.

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WEEMS *will teach* YOU *Modern* NAVIGATION

Great opportunities await those who prepare themselves now for service as navigation officers. You can master this subject in a surprisingly short time by studying the Weems System of Navigation. The completeness and efficiency of the Weems System are attested to by many world-famous navigators. Because its simplicity and accuracy save time and costly errors, Weems is fast surpassing other navigation methods. The United States, foreign governments, and many commercial air lines have adopted portions of the Weems System. Prepare now to do your bit as a navigator.

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You may study the Weems System at home through carefully conducted correspondence courses, or through individual or classroom instruction at schools in the following cities: Annapolis, Baltimore, Boston, Denver, Los Angeles, Miami, New Orleans, New York, Philadelphia, San Diego, Seattle, and Washington, D. C.

Weems Texts and Instruments

Those who wish to further their present knowledge of navigation will find many of the texts and instruments used in the Weems System invaluable and are invited to purchase these separately without necessarily taking either the full marine or air navigation courses.

Marine Navigation. Latest methods	$6.00
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Navigation Charts. Five new skeleton navigation charts for dead reckoning and radio navigation. Price per chart	1.00
DEAD RECKONING EQUIPMENT	
Aircraft Plotter Mark II (Department of Commerce Type) Scales 1:1,000,000 and 1:500,000	$2.00
Navigation Note Book	2.00
Combination: Navigation Note Book and Plotter	3.60
Universal Plotting Sheets per dozen or in pads	.50
Speed-Time Distance Calculator	1.00
Dalton Mark VII Computer	$ 7.50
Dalton Type EI-B Computer	10.00
Dalton Model "J" Computer	40.00
Dalton MK. II, III and IV Plotting Boards, Respectively	$8, $18, $12
CELESTIAL NAVIGATION EQUIPMENT	
Line of Position Book	$2.00
Illyne Star Chart 31" by 21" with instruction booklet	1.00
Star Altitude Curves	5.00
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New York: **Gabriella Placht, 46 East 46th Street, *MU 9-7277***

WHAT OUR READERS SAY

(Continued from page 66)

GIL SMITH AND "JOYETTE"

Editor, YACHTING:

▶ Grayson Lynn's letter about Gil Smith and *Joyette* reminds me of an evening I spent in Gil Smith's house about fifteen years ago. The talk turned to *Joyette,* and old Gil, with a twinkle in his eye, told me that he had planked *Joyette* with thicker planking than the plans called for.

"You were taking a chance, weren't you?" I asked.

"Nope," he answered. "She had to weigh just so much. The heavier plankin' weighed just fifty pounds more than the light plankin', an' I figgered I could steal fifty pounds off her somewhere. I did. And that ain't all. I did a lot of things to *Joyette* that nobody knew nothin' about — not even the designer — little things mostly, but they counted. In here, for instance . . ." and he ran his thumb lovingly along the run of the model we were studying. I told him that the line I most admired in his beautiful hulls was the run.

"You've hit it," he said, almost in a whisper. "That's what makes 'em so smart."

Charlie Mower was a most versatile designer but, on at least two of his designs, the Great South Bay Shore Birds and the Long Island Sound Interclubs, the run was conspicuously clumsy. Both Charlie and Gil are dead now and, when *Joyette* won her great Sonder Class victories, there was glory enough for all. But it is doubtful if Gil got his share. He reminds me of Edward Fitzgerald, who translated the "Rubaiyat." It is hard to tell what is Omar Khayyam and what is Fitzgerald. When Gil Smith translated a boats' design into a floating beauty, it was hard to tell what part was the designer's and what was Gil's.

H. A. CALAHAN

HANDS ACROSS THE SEA

Editor, YACHTING:

▶ Since I last wrote you I have had an extraordinary slice of good luck, being posted as British naval liason officer to your airmen over here.

You will guess, I think, knowing how much I like your country and your countrymen, how very happy I am in the job.

JOHN SCOTT HUGHES
Lieut. Comdr., R.N.V.R.

England

MAINLY FOR THE COOK

Editor, YACHTING:

▶ Shiver my timbers! Does anybody west of Block Island know how to cook any fish as it should be cooked? When did you ever go aboard a yacht that had lard and fat salt pork in the ice box? You needn't answer.

If you must eat swordfish — and some of us old Down Easters must, once in a while, or die — just try this over on your old galley pianna and see how it sounds and tastes.

▶ 1st, Use a deep Revere copper bottom or a cast iron fry pan, flat bottom inside and out. Thin sheet metal ones don't spread the heat evenly over the bottom and are not really flat, and fish often sticks to aluminum. That's practical and scientific.

Take the fish off the ice and get the chill out of it. There's no sense in putting icy, wet fish in hot fat. Dry the fish so you can pat on a little flour on both sides without making a paste. Heat a little lard and some cubes of fat salt pork in the fry pan until it is smoking hot. Be sure to have enough hot fat so that the pan doesn't get dry while the fish is cooking, but don't overdo it. Lay the fish in the hot fat and let it brown on the bottom. Don't cover the pan while the fish is cooking. It steams it and it won't brown. Turn the fish over and brown it on the other side. Salt it the last thing before removing to serve. Eat it, and give thanks that the Lord set off the sea and put food in it that any lubber can fill up on, and stand a trick at the wheel or a watch in the night, and keep it inside him.

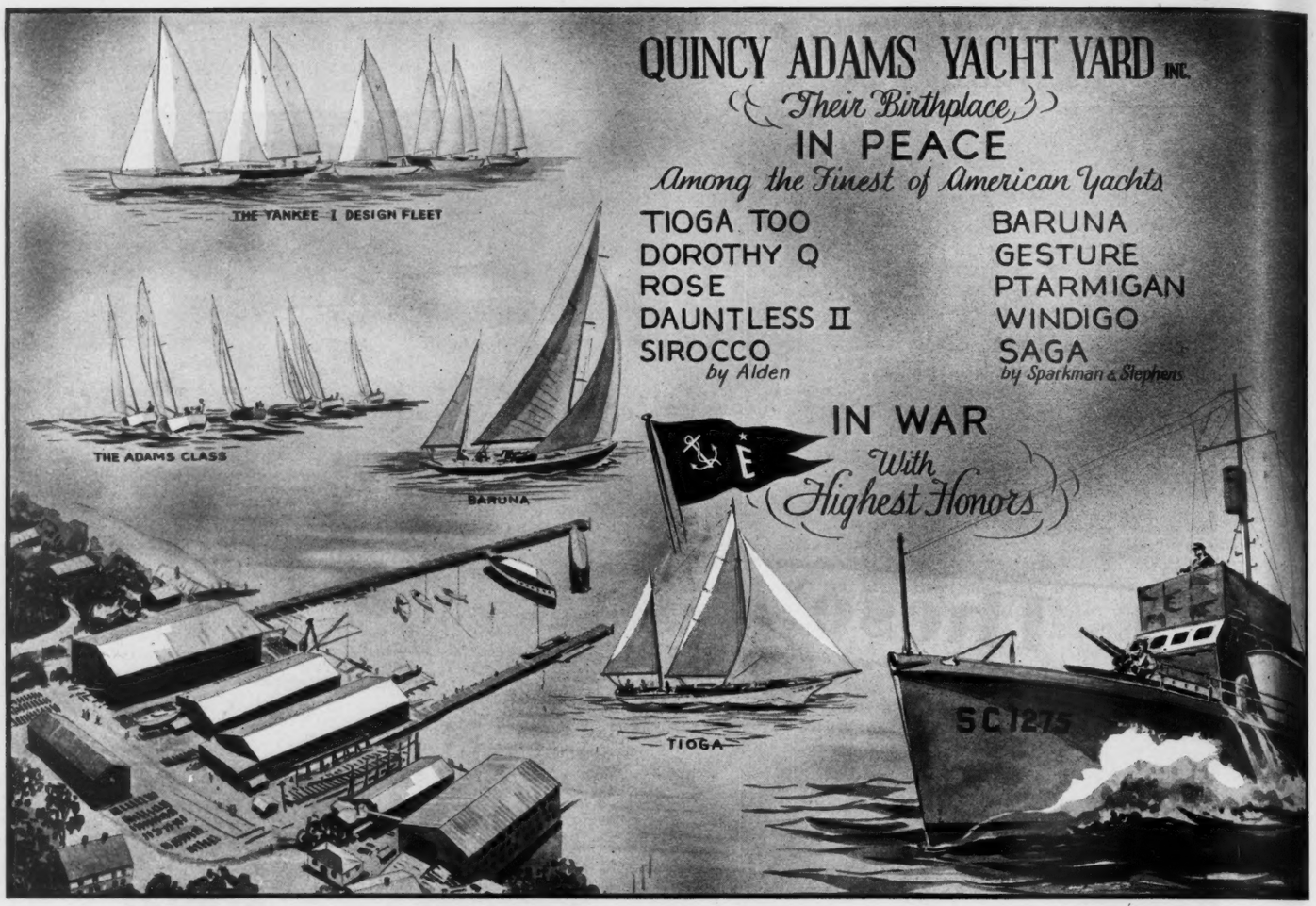
If following the above directions doesn't bring the desired results, it will be because you tried to cook without heat. It can't be done although many try to.

▶ Speaking of fish, that reminds me that I like fish chowder. I was in Boston (the home of Thompson's Spa), recently and I went into the Spa and ordered fish chowder and pilot crackers. The next five men who came in after me ordered fish chowder and pilot crackers. If you want to know about what it tasted like, follow the directions below and you will find yourself a little to windward of the Spa and footing faster.

NOT until the war ends, can the extensive facilities of the Greenport Basin and Construction Company be devoted to servicing and building the ships of peace and to serving the requirements of cruising yachtsmen.

Until that day dawns, Greenport must keep on building the ships of war — sturdy YMS's to sweep the sea-lanes clear for Victory Ships and their vital cargoes — rugged tank lighters for landings on far-away beach heads.

When men once more can seek their livelihood or take their pleasure on seas of peace, visiting ships and crews will find the same friendly welcome, the same traditional service, the same peaceful anchorage that for years have beckoned boatmen to Greenport, where Long Island Sound meets the sea.



▶ Fish Chowder ingredients are as follows:

Three pounds of haddock, cut up and with the skin and bones removed, or two pounds of haddock filleted.
Five or six medium sized potatoes, sliced thin.
One large onion, sliced very thin.
Three slices of fat salt pork cubed. Pork should be sliced 3/8" to 1/2" thick and then cubed.
Two cups of water (about).
Four cups of good milk.
One tablespoonful of butter.
Two level teaspoons of salt. Pepper to taste.

▶ Use a large kettle and try the fat out of the pork slowly, over low heat. Add the thin slices of onion and let it simmer till the onion is transparent but not brown. Add the salt, pepper and sliced potatoes and cover with boiling water (probably about two cups). Cook with water, boiling until the potato is tender. This will take about ten minutes. Lay on the haddock, cut in pieces, and cook about fifteen minutes, turning the haddock over once during the cooking. Last, add one quart of milk and let it come to a boil, then add the butter, and the chowder is ready to serve. Never let the milk boil vigorously; milk chowders should only come to a boil. *This is important.*

Serve with fresh or freshly heated pilot crackers. Crisp crackers add greatly to your enjoyment of the chowder. After eating it, you can talk yachts.

Yours for more fish, proper utensils and hot stoves.

New York PORTHOLE PETE

GASOLINE IN STORED BOATS

Editor, YACHTING:

▶ Our fleet comprises over 100 motor boats ranging from 26 to 57 feet in length. Most of these boats are hauled out and stored during the winter in one location.

Present conditions, which make it impossible to replace any of these boats in the event of their destruction, coupled with the fact that the majority of them are used for Coast Guard Auxiliary patrol or for instructional purposes has caused the owners to become extremely conscious of the fire hazard while their yachts are in winter storage.

Accordingly, a fire prevention and safety committee was appointed and I have been requested by that committee to obtain opinions from a few of my friends, who have had occasion to investigate the same problem.

▶ There appear to be two schools of thought with respect to gasoline storage in the fuel tanks of a motor boat, as follows: Group A, representing professional fire fighters and others, who advocate that all fuel tanks be filled and that the gasoline line from the tank be shut off at the tank, also that the filling caps should be securely closed. Group B maintains that the gasoline should be removed from the tanks of every boat in storage.

Group A takes the position that no gasoline tank in the ordinary motor boat can be completely drained of its contents and that the gasoline fumes contained in a supposedly empty tank represent the greatest hazard to fire fighting and control. An exploding gasoline tank spreads the burning embers all over the yard and, on account of the risk of further explosions, the firemen are not able to get close to it to fight the fire.

▶ It has been suggested that our boat owners be required either to fill their tanks with gasoline or, if this is impracticable, to dispose of the gasoline remaining in their tanks. The empty tanks can then be made gas free by flooding with water or other approved methods.

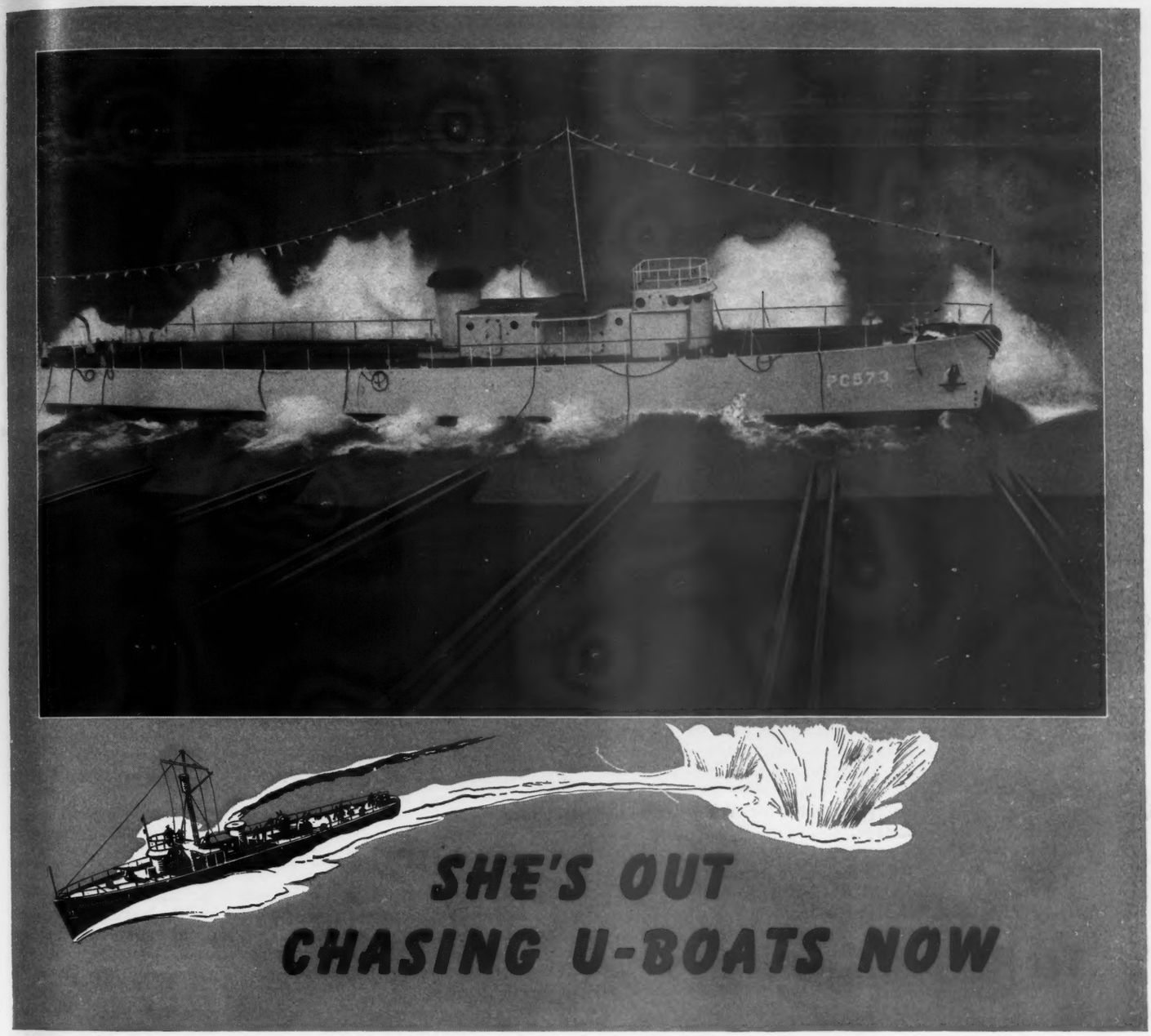
This letter is directed to you in the hope that you may have some constructive ideas to suggest or that you can advise us of the current practice in yards coming under your notice.

CHARLES H. LEACH,
Commodore, Englewood Basin, Y.C.

Englewood, New Jersey

HE WANTED NO MEDDLESOME INTERFERENCE

▶ Alexander Frith, of Granaway Deep, Bermuda, wanted a boat of his own design, with his lines and everything schemed out as he knew how to scheme it. Bert Darrow, one of the best builders in the world, was the very guy to build it. But it wasn't until his guest house business at Mizzentop flourished that he was able to accumulate the necessary gelt to put his scheme into action. He designed her for a couple of winters and set Bert to building her in the springtime.



She's not lacking for company out there in U-boat infested waters. For the country's shipbuilders . . . the same people who built your yawl or fisherman in days past . . . are literally pouring sturdy craft of all kinds on to the troubled waters of our oceans. Result: a noticeable reduction in the ratio of shipping losses.

As in happier days, these shipbuilders are standing by their experience with copper and copper alloys for equipping the vessels of war.

*Reg. U. S. Pat. Off.

For the rugged duty their ships must perform, Anaconda Metals are used at many vital points. For instance, tough, strong Everdur* for hull fastenings, fuel storage tanks . . . Anaconda Brass Pipe and Copper Tube for pipe lines . . . Brass and Bronze Rods for engine controls . . . tough Tobin Bronze* for shafting.

In one form or another, for a multitude of uses, every bit of our tremendous production of Anaconda Metals is going into the war program.

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LIFE FLOAT

It's a Life Float . . . and to clarify the various life saving devices that are often confused in maritime circles, we depict these three . . . all made by WINNER.

LIFE FLOATS: In 10, 15, 25, 40 and 60 Person sizes. New rectangular shape permits 30% saving in Balsa Wood over former shape made.

LIFE RAFT

LIFE RAFTS: In 10, 15, 18 and 20 Person sizes. Fully reversible with well deck compartment accessible from either side with space for food, water, flares, etc.

BUOYANT APPARATUS: In 20 Person size.

BUOYANT APPARATUS

All Winner Floats, Buoyant Apparatus and pontoons of Rafts protected by Winner Hydrotuf, our exclusive covering which is completely waterproof and highly resistant to fire, abrasion and other damage.

All of the above products approved by the MERCHANT MARINE INSPECTION — U.S.C.G.

TO RELEASE LIFE RAFTS

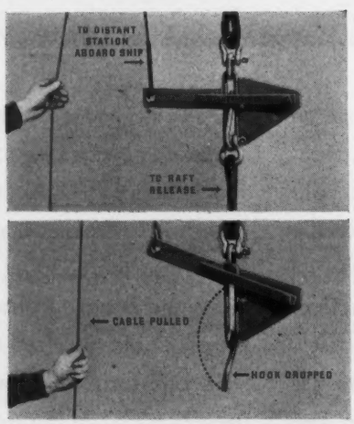
FASTER . . .
EASIER

Use the

WINNER-SIMONDS

Approved Pelican Release

(Pat. Pending)



1. Operates instantly with little more than fingertip control.

2. Long cable attached to bar permits release from *any* spot between hook and end of cable . . . instead of just one place which may be inaccessible when ship is in distress.

3. Recommended by the U. S. Coast Guard.

West Coast Licensee { HUNTER BOAT CORP. Suisun City, Cal.

WINNER MFG. CO., INC.

Box 399 K **TRENTON, NEW JERSEY**

Things were going along fine. Since the tiny yard was nearby, he could visit there nearly every day and watch her progress. One day things did not look just right. He grabbed the Negro who was working on the packet and said: "Look here! Aren't you changing my hull lines? You've taken off too much in this belly."

"Yes, Mr. Zandy, I have, but de white-haired gent say she *should* come off."

"White-haired gent! Listen, you blamed rascal, nobody — what white-haired gent?"

"Dat ol' man who 'pears every mornin'."

"Now look, Crimp-top, get this straight. Nobody changes any lines on this boat *at all*, understand?"

"Yassuh, Mr. Zandy."

▶ A couple of days later, some changes were noticed by Zandy around the afterbody and he blew up again. The reply was the same: "Dat ol' man tell us to make dem changes, Mr. Frith."

Explosion, after explosion ". . . from anybody else. Do you understand that?"

"Yassuh, Mr. Frith."

▶ Two days passed. Zandy thought he would check up in the morning on the rudder post. When he got into Bert's sweet smelling, cedar-filled shop, there, sure enough, was an old gray-haired man, arms akimbo, bending over and squinting at the keel curves of Zandy's sweet little ship. "Leedle more ought to come off here, m' boy."

Zandy whirled the gaffer around and shrieked: "I will have you understand this is *my* boat, built to *my* design, and if she doesn't sail properly it's *my* fault. Nobody is going to change a single iota of her lines or gear!"

▶ Taken aback, for a full minute the old man's blank face didn't wrinkle and crease and grow into the complete twinkle that finally spread from his eyes all over his well formed features. Then he answered: "Spoken like a true yachtsman. Exactly what I would say myself. Allow me to introduce myself. Herreshoff's the name. I designed one of my own once too."

* * *

▶ Oh, yes. Zandy Frith did have an overstuffed leather chair moved into Bert's shed and instructed all the builders to take any corrections that the old white-haired gent made from here out. *Rainbow* is one of the sweetest sloops ever to sail into Crow Lane.

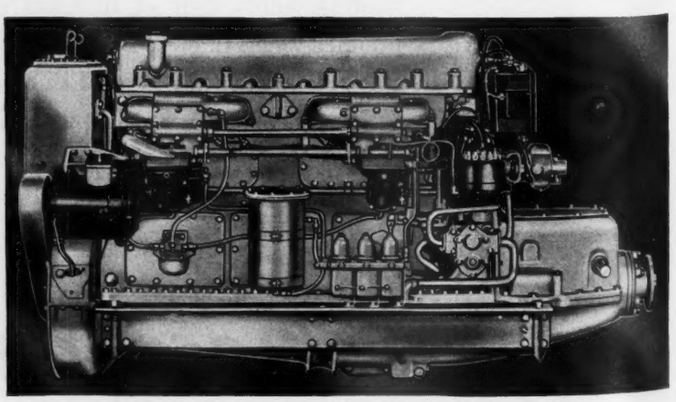
WORTHEN PAXTON

KERMATH ADDS ADDITIONAL SPACE

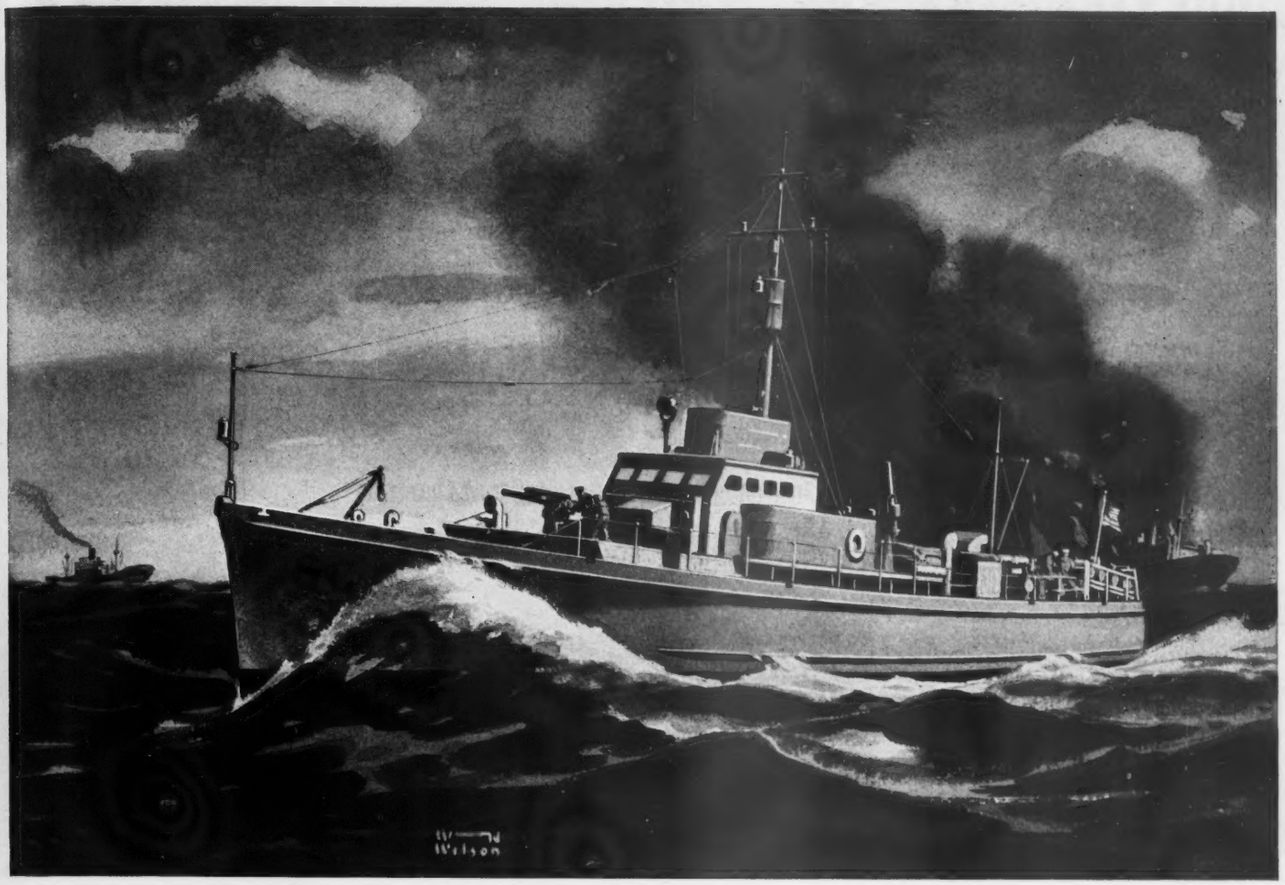
▶ The Kermath Manufacturing Company is one of the many engine manufacturers which has had to enlarge its plant facilities in order to keep pace with steadily mounting war orders. From the famous two story building which was the company's second factory, have come countless numbers of the Kermath 20's, which are today operating in almost every important port in the world.

As additional plant facilities were required prior to the war, a new building was constructed to the left of the original structure. When increased floor space and facilities were required, about a year ago, the building housing the company's main offices was demolished and a three story addition joining the two former buildings was erected.

This latest addition has added nearly 100 per cent to the available space in the plant, but even that proved insufficient to the demand of the national emergency and an adjoining piece of property, a three story building, was purchased. The general plant structure has now been rearranged and revised and new and more modern machinery has been added.



Kermath's newest model is the Sea Raider Six. Of 250 hp., it has a bore of 5¼", a stroke of 6" and develops its power at 2400 r.p.m.



. . . That Free Men May Sail Free Seas Again . . .

THAT free men may sail free seas again . . . undersea raiders, preying upon men and ships of freedom-loving nations, must be forced to the surface, or to the bottom — captured, or destroyed forever.

Helped by other members of the team, planes, blimps, and larger ships, the 110′ subchaser is the workhorse of the antisubmarine fleet. She is carrying on the tradition of the U. S. Navy against aggression. Her assignments include coastal convoy and patrol duties under all conditions and in all kinds of weather. She goes to sea, she takes it, and she dishes it out, too.

Here at Elizabeth City we are proud of the part we are able to play in the War for Freedom. It is an important part, building these sturdy wooden ships — a part that we would be unable to play today had it not been for the experience gained in past years through our work with many yachts and commercial craft.

But, proud as we are of our present job, it is not the work we like best. What we would like to be doing, and what we look forward to doing again, is building, servicing and repairing for you yachtsmen. We long for the days when yachts again will be cruising up and down the coast, stopping at our long wharves for supplies and water, or just for visits.

So, we are busy building for war . . . that free men may sail free seas again.

Elizabeth City Shipyard

ELIZABETH CITY, NORTH CAROLINA

PRODUCTION-LINE BOAT-BUILDING ON THE MAINE COAST

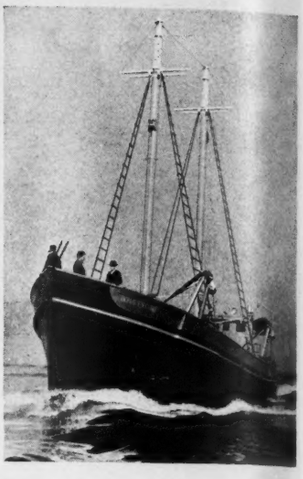
We at Southwest Harbor have been engaged in war production for several years and have built up one of the largest boat production lines in New England. It was a signal honor to us to be presented the first joint Army-Navy production award in Maine.

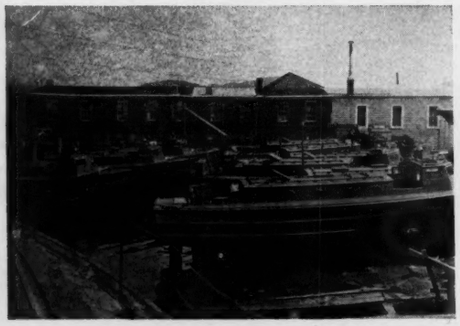
For the duration our entire facilities will be devoted to winning the war. Afterwards, we shall be able to serve yachtsmen better than ever before.

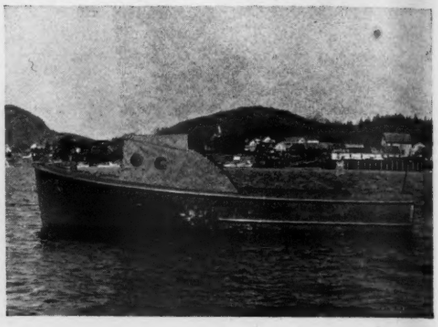
MANSET BOAT YARD • SOUTHWEST BOAT CORP.

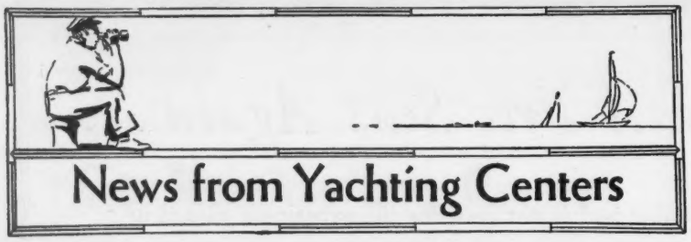
HENRY R. HINCKLEY, *Pres.*

SOUTHWEST HARBOR, MAINE









FLORIDA TRADE WINDS

By Vivyan Hall

▶ The Coast Guard has divided the Seventh Naval District, which is made up of most of Florida and its 2200 miles of coast line, into fourteen sections. Each section is in charge of its own Captain of the Port who is responsible principally for patrolling. A number of these officers have cruised and fished in the same waters. Lieutenant, j.g., C. M. Brookfield, old time resident of Elliott Key, has the New Smyrna district. At Key West is Commander C. H. Hilton who, as C.O. of the *Pandora*, convoyed the racers from St. Petersburg to Havana. At Miami, Lieutenant Richard H. Hunt is a former commodore of the Rod and Reel Club. Aiding him is Lieutenant, j.g., George R. Loehr, flag officer of the Lauderdale Y.C. Lieutenant M. G. Field is now Captain of the Port at Palm Beach and Lieutenant, j.g., A. B. Angle at Fort Myers. Following the suggestion of Don McCarthy, of the Rod and Reel Club, flotilla auxiliaries have been picking up palm fronds, coconuts and other floating hazards to propellers.

▶ Another service in which amateur sailors are particularly active is in anti-submarine work. Among the recent graduates of the training school at Miami have been William H. Taylor, of the *Herald-Tribune*; Roger S. Robinson, who raced his *Vagabond* to Norway and his *Sirocco* to Bermuda and elsewhere; and Hugh M. Matheson, Jr., winner of the 1937 Havana race in *Babe*. Of the four Matheson brothers, all in the Navy, William is now completing the indoctrination course at Harvard and Finley and Hardy have gone out from the sub-chaser school to new boats. Both PC and SC boats are manned by crews that go through the school training as units. At the docks here in December, the new S.C. *763* was given to Brazil. Captain H. H. J. Benson, district chief of staff, turned the warship over to Commander Howard Cox, head of Brazilian sub-chaser activities, and to the new commander, Lieutenant Aristides Campos Filbo. This 110-footer, the third naval vessel so presented to Brazil, should be most useful as the enemy submarines are being forced southward.

▶ On December 7th, the Tampa Shipbuilding Co. sent seven warships overboard for the biggest mass launching in the history of the state. First to go was the destroyer *Piedmont*, announced by the Navy as the largest warship ever built south of Newport News. She was followed in quick succession by the *Alarm*, *Apex*, *Alchemy*, *Arcade*, *Arch* and *Armada*, all seagoing mine sweepers. The Daytona Beach Boat Works has launched its eighth 100-footer for the Navy. S.C. *1303* was built in 55 days. The first five of the boats are in the service and others coming along steadily.

▶ Although racing is largely off for the duration, the Tampa Y. and C.C. is open to officers of the armed forces every night except Sunday. The Sarasota Sailing Squadron is holding Sunday races over a course within the harbor. John McKeehan's *Jezebel* is leading the fleet in points with Charles Luxier's *Gelu* and Cecil Rowe's *Runt* in second and third places. At Jacksonville, the Rudder Club, with Al Stephenson as commodore and John Saare as race committee chairman, has been keeping racing going. Stars, Comets and miscellaneous craft, from Ortega and Riverside districts and from the Bolles School, make up the fleet. At the annual trophy dinner, Henry Robson was declared Comet champion while Edwin Young received first honors in the Open Class. The series ended in a tie in the Star Class with the sail-off to come later.

▶ The Judge Auerbach Memorial Trophy, which has been the feature prize for hydroplanes at recent Biscayne Bay regattas, has been withdrawn from motor boat racing until after the war. This announcement was made by S. Mortimer Auerbach as he left for service in the Army. Considering his experience with his series of record-breaking *Emancipators*, it is hoped that his duties will be changed to service in the Amphibian Command. Lieutenant Commander W. W. Kenner, formerly in charge of the full rigged training ship *Joseph Conrad*, is now running the new Coast Guard training station at St. Augustine. Two more boats of the Biscayne Bay Y.C. fleet are wearing the Navy gray. Chapman J. Root's Diesel yacht *Ellenar* is with the Navy's inshore patrol. The motor cruiser *Dart* is now C.G. *2916* and is continuing work that she did in the Auxiliary. Louis DeForrest

Columbian Propellers

★ Carry the fight to the enemy

HOW WELL they do it is measured by the heavy demand for Columbian Bronze Propellers and Columbian sturdy fittings. Twenty-four hours a day Columbian products flow from factory to U. S. Navy and Army craft in ever increasing volume. Their performance in action stands up to the best traditions of Columbian quality and performance.

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FREEPORT, LONG ISLAND, N. Y.

Columbian Catalog
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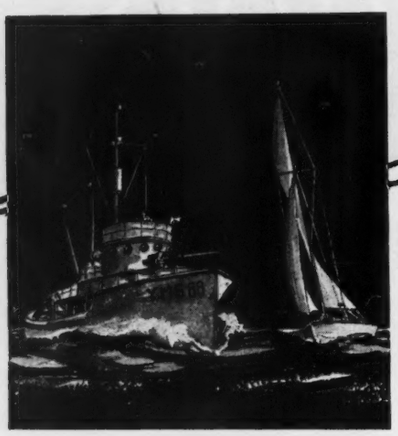
TODAY'S PRODUCTION



Is Tomorrow's Progress

In company with America's boat building industry, Hubbard's South Coast Co. is setting production records on warship construction. To Americans everywhere this means that our nation is receiving the tools with which victory will be forged ahead of time . . . to yachtsmen and commercial boatsmen it means the added bonus of more economical construction when the war has been won.

HUBBARD'S

South Coast Co.

Newport Beach, Calif.

Downer, affectionately called Captain Downer by the generations of boys and girls that he has taught to sail both on Barnegat Bay and here, has gone into the Coast Guard Reserve, with his boat, as chief boatswain's mate. The Henry Howards, of Newport and Nassau, have put their *Alice* back in commission after a summer in storage at the Pilkington Basin in Fort Lauderdale. They are living on board where Mrs. Howard directs the activities of the Merchant Marine Library and also the editing of the "Seamen's Handbook for Shore Leave."

▶ For the maintenance of boats in the inshore patrol, the Navy is reported building an $800,000 section base at Panama City. This will be similar to the bases now in service at Key West, Fort Lauderdale and St. Petersburg. This latter establishment was completed in a bare two months, about half the estimated time, and includes administration building, barracks, mess and bachelor quarters. Lieutenant Commander R. G. Biglow is in charge.

FROM SAN FRANCISCO BAY

By Jesse L. Carr, M.D.

▶ Returned from the war, either permanently or for a brief furlough, are past Rear Commodore Gene Bennett, of the St. Francis Y.C.; Lieutenant Colonel Arthur Farlow, who is also a past Rear Commodore of the St. Francis; and Eddie Shea. These yachtsmen have all returned briefly from Washington, D.C.

Jimmie Black is back on crutches, having been wounded in a Norwegian corvette while convoying between Alexandria and Malta.

Dr. Chris Christiersen has returned on a furlough from Western Australia, bringing with him the burgee of the Royal Fresh Water Bay Y.C.

▶ New officers of the St. Francis Y.C. for 1943 will be: Commodore, Sydney W. Ford, to succeed himself; vice commodore, Ingraham Read, to succeed Reed J. Bekins; rear commodore, J. D. Fraser, to succeed Ashfield E. Stow. Directors for a three-year term, Ashfield E. Stow, to succeed J. D. Fraser, and Joseph L. Cauthorn, to succeed himself; Directors for a two-year term, Howard H. Hurst, to succeed Ingraham Read; and for a one-year term, Moritz H. Jaehne, to succeed himself.

▶ Boat sales show extreme activity for this season of the year, J. Arvid Johnson having bought the *Blue Seas* from Henry Cartan, who has gone into the Navy. Mr. Arvid bought the boat for an around-the-world cruise and will spend the duration getting her ready. The yawl *Emerald* was recently purchased by Mr. Smith in Los Angeles and, in spite of war restrictions, brought under permit up the coast to San Francisco. Mr. Smith formerly owned the converted Bird boat *Towhee*.

▶ Rudy Smith, who bought the *Imp* from Bud Symmes, started a family enthusiasm for boats which led his brother Warren to buy the sloop *Bat*. Intending at the outset to replace a little dry rot, Warren Smith has now progressed to the place where he is completely rebuilding the sloop in San Francisco Yacht Harbor.

▶ Walter Dunn, of San Mateo, has nearly completed in his back yard a 53′ cutter which he has modeled after the *Dorade*. The boat has 11′ 6″ beam, 7′ 0″ draft, and will be powered with a 4-cylinder Buda motor.

▶ Martin Kenoyer sold the *Jackpott* and Ray Melvin has sold his *Chinook* to Ken Loomer and Leo Steuerwald, respectively. These two skippers are converts from ice boating.

▶ Ed Wilkins has started work on a new 32′ V-bottom cruiser for himself. She will be a raised deck boat and will have twin motors, the type being not yet decided upon.

▶ Nelson Jones, a past Commodore of the Corinthian Y.C., has sold his sloop *Cyretta* to Dr. J. C. Campbell. Dr. Campbell is new on the water, this being his first boat, and his purchase of this Farallone Clipper makes the class a closed medical corporation; the entire fleet now being owned by doctors.

▶ Mrs. Blanche Benedict, whose husband is now a lieutenant on active duty with the Navy, has solved the housing shortage by taking the *Altura II* as a domicile for the duration.

▶ At the Richmond Y.C., Art Eastell has taken over Hal Stuart's duties as secretary for the duration, and the Richmond Y.C. announces many new enlistments and entries into the services. Ray Sage has passed all the tests for a Navy warrant officer; John Reader has been commissioned as an ensign; "Fanny" Fox has been sworn into the Navy as a lieutenant by his father, who is United States Commissioner Francis Fox. John Walsh, who

and ready for fire *below decks*

PT-BOATS, torpedo boats, sub chasers and mine sweepers are scoring magnificently in daring actions around the world. They're being turned out in steadily-growing volume—and they all need fire protection.

Hundreds of these craft of the Army and Navy auxiliary fleets rely upon Kidde Extinguishing Systems for this protection. At the first sign of danger, a touch on the controls sends a withering blast of carbon dioxide snow and gas to smother the blaze.

Because these famous fire-fighters have been called into the service, private yachtsmen may not be able to install new systems now. So plan to get the most out of your present equipment. Call your Kidde dealer for re-charging or other service. If he's not listed in the Classified Telephone Directory under Kidde, write us for the name of nearest representative.

K Kidde

Walter Kidde & Company
Incorporated
115 West Street, Bloomfield, N. J.

PC's DELIVER ASH CANS TO HITLER

Uncle Sam's PC's and 60 Other Types of Craft—Danforth Equipped

Like the destroyers, these speedy new PC's do convoy duty, act as scouting craft and sow sub-infested areas with "ash can" depth charges to cave-in enemy subs and trap the Axis rats.

Modern to the last detail, these fighting craft are Danforth equipped. Danforth Anchors save weight and steel. Streamlined, self-burying design increases holding power. These features make Danforth the ideal anchor in war *and peace*.

★

Official U. S. Navy photo

PC SUB-CHASER — Danforth equipped

Write for Free Folder

R. S. DANFORTH, 2162 Center St., Berkeley, Calif.

formerly skippered the *Ishtar* and went into the Navy as a lieutenant, j.g., is now assigned to the O.C.D. as a dim-out expert.

▶ Both the Cryer and Stone yards in Oakland are now working on 110′ landing boats for the Army. These are an exceptionally seaworthy and durable craft, moderately shallow draft, and powered with 550 hp. Atlas Diesels.

MAINE COAST NOTES

By Lawrence B. Getchell

▶ Arriving three days prior to the season's worst blow, Leroy Flye, of Brooklin, Maine, recently sailed into that port ending a 300-mile, single-handed, voyage from Wareham, Mass., in a 12′ Herreshoff sloop. He brought the boat down for her owner, Alan C. Bemis, a summer resident of Brooklin. Flye sailed daytimes only, making six stopovers on the way. He reports having been 25 miles or more offshore at times. Might be fun in August, but in mid-November's snow-squalls? Brrrrrrrr!

▶ Top honors as the "die-hardest" yachtsman in Mt. Desert Island's vicinity seem to have been won this year by Miss Mildred Rogers, of Winchester, Mass., and Southwest Harbor. She last sailed her Lawley-built sloop *Poseidon* on November 8th — closest competition among the alleged hardier sex having given up days before.

▶ Gray Boats, of Thomaston, recently launched the first of seven wooden 110′ covered lighters being built there for the Navy. Superintending construction of these vessels is Malcolm J. Seavey, of Port Washington, N. Y., who came to Gray Boats expressly for this job.

▶ On October 18th, the Todd-Bath Iron Shipbuilding Corp., of South Portland launched the three British cargo carriers *Ocean Glory*, *Ocean Crusader* and *Ocean Gypsy*, thereby virtually completing the yard's 30 ship contract with the British Ministry of War Transport. These vessels are all rated 10,000 tons, measuring 410′ by 57′. Todd-Bath laid the keel for Number 1 on May 24th, 1941 and launched Number 30 512 days later. With this job finished, the yard is now building Liberty Ships. The first pair of these was launched on Armistice Day. They are the *Winslow Homer* and the *William Pitt Fessenden*.

▶ The wartime call for seagoing bottoms is making noticeable inroads into the remnants of Maine's once vast windjammer fleet. First to be called from here was the three-masted schooner *Lucy Evelyn*, which was sold by her Machias owners to a New York firm a few months ago, presumably for service in the South. Next to go was the Munroe Export Co.'s 318-ton *Netherton*, also a Machias-built three-master. But the *Netherton* went north — permanently — for she burned and sank at Burgeo, Newfoundland, in November. Two of her seamen lost their lives in the catastrophe.

▶ The latest Maine vessel scheduled for duty in other waters is the venerable two-sticker *William Keene*, recently sold by the W. H. Shurtleff Co., of Portland, to Peter Paul, Inc., Naugatuck, Conn., through the Knox Marine Exchange. This 56-year-old schooner is now in the yard of the Camden Shipbuilding and Marine Railways Co., being fitted with a 90 hp. Hill Diesel auxiliary and a deckhouse for crew's quarters and galley. When that work is done, she will sail for the Caribbean to carry coconuts from Belize, British Honduras, to Tampa.

The *William Keene* is a noteworthy vessel. Originally a Grand Banks fisherman, she was built in 1886 at Damariscotta by William Keene who gave her the best in materials and shipbuilding craftsmanship: white oak frames and timbers, native white pine planking, beech ceiling, fastenings of copper and locust, and plenty of salt between "skins." Many attribute the remarkable soundness of her hull to the use of this preservative and the fact that salt has also been her principal cargo for the past forty-odd years. Literally, she's been "pickled" for two thirds of her life.

For all that is known here, this vessel may be the only existent likeness of the North Atlantic fishermen so numerous in her youth. Certainly she is the truest specimen still in service. She has a high, clipper bow. And her lengthy jibboom prolongs a sheer line that sweeps up from a low point just abaft the mainmast. Her rig has never been cut down or altered from the original main topsail plan — distinguishing mark of old time "Bankers."

Those features, combined with the slight rake of her masts, give the *William Keene* her typically racy appearance. None of her deadeyes has given way to turnbuckles. Few, if any, of her fittings have changed in kind. When she leaves Maine to ply the Caribbean, she'll take with her the long held reputation of being the fastest, sweetest looking schooner in the Down East coasting business.

BURGER BOATS

To Keep the Sea Lanes Open

YMS minesweepers and SC subchasers are leaving Burger's production lines, ready to go to sea. Soon we'll also be building the new PCS class subchasers. Your War Bonds are helping build this fleet—and we hope that you're going to keep on buying War Bonds until Victory Day. Then, your investment which helped fight this war can be turned into a Burger boat that we'll build for your pleasure.

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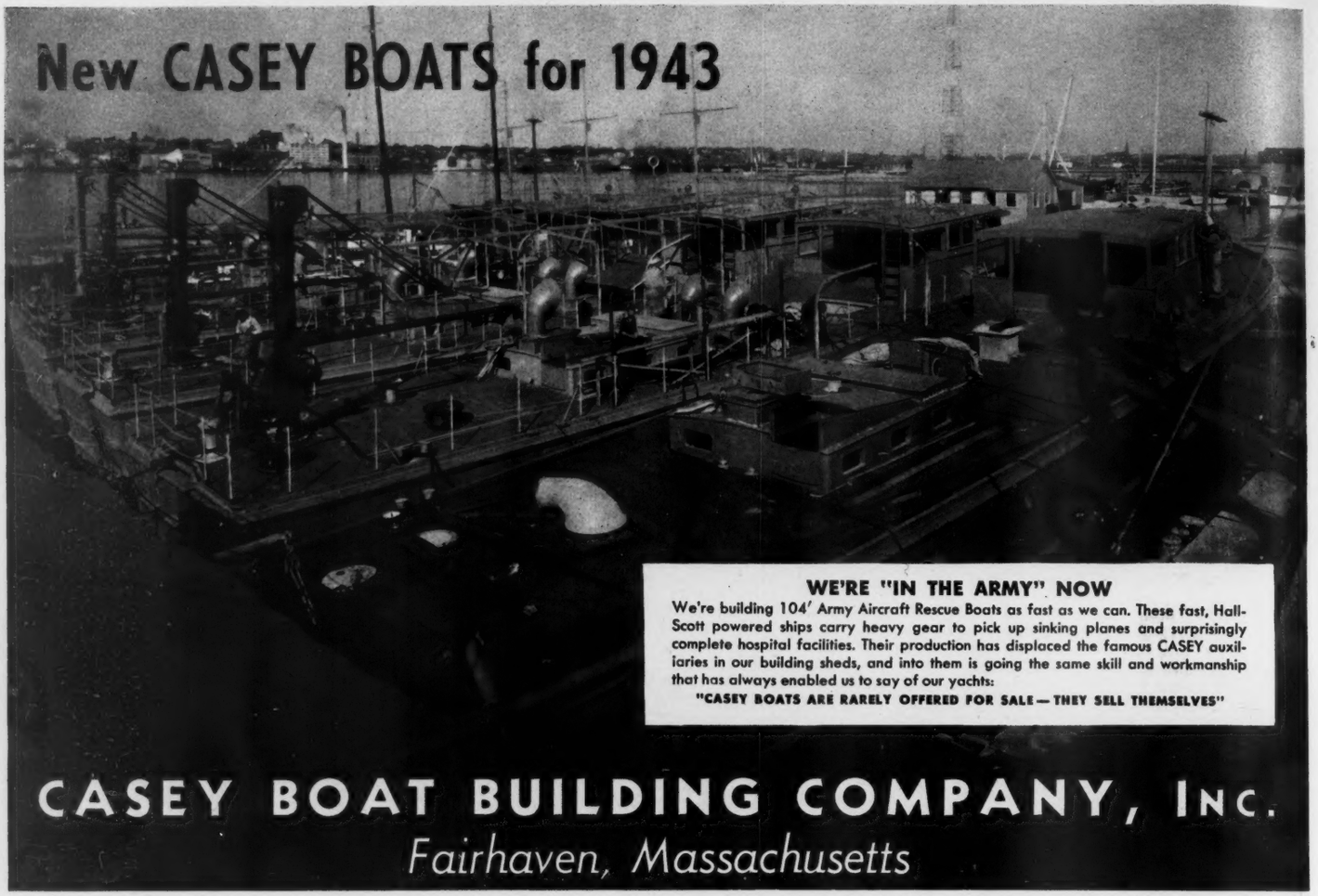
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LAKE ONTARIO NEWS

By W. Peck Farley

▶ The officers of the Central New York Y.R.A. held a meeting in Syracuse on December 6th at which it was voted to carry on the organization, in so far as possible, for the duration. The same men who held office last year will be at the helm again for 1943. They are: President, Floyd Reeves, Onondaga Y.C.; Vice President, Vincent Hall, Canandaigua Y.C.; Secretary and Treasurer, William Tapley, Seneca Y.C.

They will institute a program in the C.N.Y.Y.R.A. that has been successfully tried out at the Onondaga Y.C., namely, training young sailors, both boys and girls from 12 years up, in the art of handling small craft, teaching them the "lingo" of yachting and the fundamentals of boat racing. This seems like a particularly worthwhile program at this time and one which might be of interest to clubs other than those in the C.N.Y.Y.R.A.

▶ The Chester Millers of the Nine Mile Point Y.C., are an ardent Snipe family. Mr. Miller, Commodore of the Snipe International Racing Association, is building a new Snipe in his cellar. He assures us that, unlike many other boats which have been "cellar-built," there will not be undue difficulty in getting his boat out for the spring launching. This brings the Miller Snipe fleet to five, with all members of the family active.

▶ The Board of Governors of the Newport Y.C., which is made up of the four flag officers and the fleet captain, held a meeting on December 6th. At this meeting plans were formulated for keeping the group as closely knit as possible during the winter, with more winter activities than ever before. The first of these events will be a business meeting for the membership in January; the first of four such meetings the Newporters hold each year.

▶ At a recent meeting of the Trustees of the Sodus Bay Y.C., a timely holiday thought was brought forth which will give members in the military services much pleasure and promote kindly thoughts of the home club. A carton of cigarettes will be sent every lad serving Uncle Sam.

Harrison Bloomer, his brother Bill, and Bill Marks, Newark, N. Y., boys, who received their ratings in the Navy through their volunteer service aboard R. A. S. Bloomer's *Vega II*, in connection with their Coast Guard Temporary Reserve Patrol work, have returned home after several months' service on the Atlantic seaboard. *Vega II* looks quite the authentic thing in her battleship gray war paint.

During the course of two preliminary Sodus Bay Power Squadron sessions, it was decided to offer a nineteen-week Navigator's course to be sponsored by the Power Squadron and the Coast Guard Auxiliary. Instructors, who will donate their time, are: Lieut. Comdr. Don Welch, Harrison Bloomer, Lym Stuart and Peter Kemper. It is believed that approximately fifty men will attend the classes, including nearly thirty high school students who appreciate the opportunity afforded.

▶ The Annual Meeting of the Rochester Y.C. was held December 3rd and the following officers for 1943 were elected: Commodore, William S. Nevin; vice commodore, Lucius ("Bob") Gordon; rear commodore, Jonathan Heinrich; treasurer, Raymond W. Staub; secretary, James G. Dale; corresponding secretary, Oscar Marth; measurer, Oscar Marth; fleet surgeon, Dr. Harold H. Baker; directors for two years, George Ford, Harry C. Stevenson and Philip G. Hoffman.

It was a well attended meeting with the chief speaker, "Herr Heinrich Himmelbauer, former Nazi Gauleiter in Holland, and also Unteroffizier on Goering's Schooner *Die Lorelei*," creating a great deal of interest and speculation. "Herr Himmelbauer," of course, turned out to be a hundred per cent American but the hoax was well carried out and, while there were doubts in the minds of some as to his authenticity, none was quite sure until he was well past the introductory remarks of his speech.

▶ The schooner *Nor'Easter*, belonging to Carol Gray, of Larchmont, which we announced last month would haul out at R.Y.C. has been taken over by the U. S. Coast Guard and is in active service somewhere.

Edwin C. Broderson, Herbert Marth and Everett L. Priest have joined the ranks of Rochester Y.C. men in the armed forces.

Peck Farley has been elected secretary of the 12th District, International Star Class Y.R.A., with Cebern Lee, of the Seneca Lake Fleet, as Assistant Secretary.

▶ We learned recently that a bangalore is an ordinary piece of twenty-foot iron pipe, filled with TNT and fitted with a detonator. Don't know about the iron pipe and the detonator but there are many on Lake Ontario who, having raced against Bud Doyle in *Bangalore*, were well aware that she was filled with TNT.

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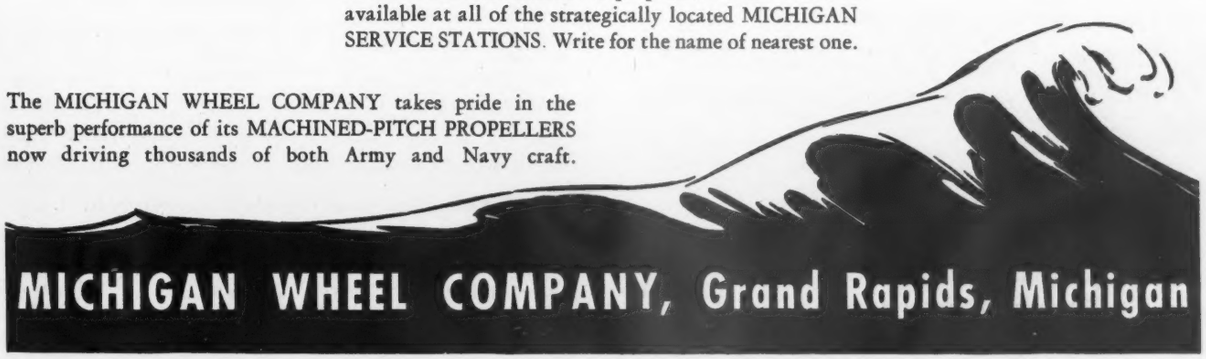

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Prize winners for 1942 at a get together dinner of the Pointe Claire Y.C.

THE 1942 SEASON ON LAKE ST. LOUIS

By "Beaver"

▶ Both Lake St. Louis' yacht clubs, the Royal St. Lawrence and Pointe Claire, suffered severely last summer from the absence on active service of a big proportion of their members, and also from the fact that many more found it extremely difficult to spare the time for racing and other yachting activities. In spite of all difficulties, however, racing schedules were carried out successfully, a surprisingly large number of boats were in commission and were used just as often as was possible under the circumstances.

▶ At the Royal St. Lawrence Y.C., to stimulate interest among less experienced sailors, a new dinghy class, known as the V Class, was started last summer. Sloop-rigged dinghies have been popular at the R. St. L.Y.C. for the past few years but it was thought that a less expensive, easier to handle type of dinghy would appeal to many members. A cat rig was used on these boats with a short mast and high peaked gaff; in fact, the boats are quite similar to those which made dinghy racing so popular on Lake St. Louis over 20 years ago. Many of the V's were sailed by girls; one of them, Miss Audrey Stevenson, was the principal prize winner of the 1942 season.

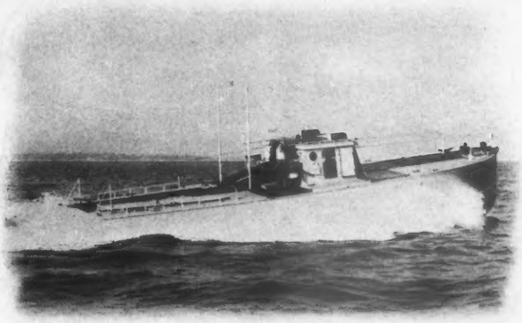
Following is the complete list of trophy and prize winners:

	Trophies	
Lake of Two Mountains Cup	*Kingfisher*	A. Ferguson
Hugh Kennedy Trophy	*Zoe*	A. P. B. Shearwood
Thorella Cup	*Witch II*	E. L. Jowett
Frank Scott Trophy	*Mungo*	H. Horner
Converse Cup	*Pheon*	P. Kerrigan
	Class Championships	
International Dinghies	*Witch II*	E. L. Jowett
V. Class	*Vim*	Miss Audrey Stevenson
	Evening Series	
	Vim	Miss Audrey Stevenson
	Penguin IV	Capt. E. Scott
	Skipper	Don Hains
	Mungo	H. Horner
	Brud III	B. Woodward
Ladies Race, Won by *Vim*		Miss Audrey Stevenson
	Annual Regatta	
D Class	*Le Cygne*	Dr. H. Ranger
E Class	*Nanette*	R. C. Stevenson
Sloop Dinghies	*Witch II*	E. L. Jowett
V Class Dinghies	*Vamp*	Miss Marion Woodward

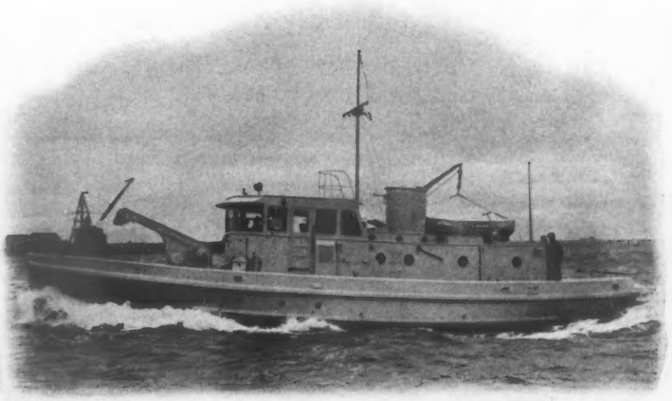
Kingston Novice Series Won by R. St. L.Y.C. crews. Taylor Kennedy, Garth Beckett, Howden Horner, Peter Kerrigan, Tim Robinson.

Baie d'Urfe — Beaurepaire Regatta Prizes, won by R. St. L.Y.C. members.

B Class	*Mount Royal*	G. S. Hamilton
Misc. Class and Heavy Cruisers	*Gillian*	G. Hessy-White
Sloop Dinghies	*Pheon*	P. Kerrigan
V Class Dinghies	*Vim*	Miss Audrey Stevenson



LUDERSHIP MEANS PIPELINED SHREDDED



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▶ The keenest of racing was seen in the PC class at the Pointe Claire Y.C. and the little one-design 19-footers provided plenty of competition although the number of starters was under par for the first month or so. It was found advisable to regroup the other classes so the D's, E's and Cruising Classes became Group I, Group II and Group III, size and speed determining the different groups. Group I comprised the larger boats and provided some good racing, all on percentage handicap.

Complete results for 1942 follow:

Group I

Championship Series	Won by *Denmac*	Q. McCarrey
Evening Series	*Fadd*	J. A. Dakin
Harold James Memorial Cup	*Fadd*	J. A. Dakin

PC Class

Class Championship	Won by *Winona*	J. C. Kenkel
Gudrun Cup	Won by *High Tide*	A. H. Thomson
Twilight Trophy	Won by *Winona*	J. C. Kenkel
Evening Series A	Won by *High Tide*	A. H. Thomson
Evening Series B	Won by *High Tide*	A. H. Thomson

Annual Regatta Prizes

D Class	Won by *Le Cygne*	Dr. H. Ranger
E Class	Won by *Fadd*	J. A. Dakin
PC Class	Won by *Alert*	A. Fee & P. Lariviere
Group I	Won by *West Wind*	E. L. Jones
Group II	Won by *Windy*	R. Morrison
Sloop Dinghies	Won by *Witch II*	E. L. Jowett
V Class Dinghies	Won by *Lola*	S. A. Stephens

Baie d' Urfe — Beaurepaire Regatta Prizes, won by P.C.Y.C. members.

Ishkoodah Cup	Won by *Fadd*	L. Watters
D Class Cup	Won by *Chinook*	A. R. Currey
E Class Cup	Won by *Fadd*	L. Watters
PC Class Cup	Won by *Alert*	J. Sears

COMET COMMENTS

By Malcolm D. Lamborne, Jr.

▶ A Barnegat Bay Comet skipper who has transferred his allegiance to Chesapeake Bay, and Potomac River in particular, won the high point trophy for Comets racing in Bay regattas during 1942. The trophy is one of a number sponsored annually by the Chesapeake Bay Y.R.A.

The winner is Lt. Edward Braddock, U.S.N.R., whose Comet *Toby* scored 1535 points in five sanctioned regattas during the year. Lt. Braddock, a leading light in the Potomac River Comet fleet at Washington, formerly was fleet secretary of the Barnegat Bay Y.R.A. fleet.

Scoring a second place in the high point tabulations for the Bay was Miss Helen Grosvenor, of the Gibson Island Y.S. fleet. Her *Echappee* scored 1525 points. Third place went to Robert I. Welsh's *Sky Fire*, of the Indian Landing B.C. fleet on Severn River.

▶ With the Medford B.C. Comets snugged down for the winter, sailors' thoughts at the Massachusetts club are turning to ice boating. Fleet Captain Hank Moore is among those trying their hands in the new Class E ice boats.

Although Cometeers there are leaving regularly for the services, prospects are good for at least two more Comet additions this spring at Medford. The Comet *Argo*, formerly owned by Bill Neilson, regional vice president of the C.C.Y.R.A. for Massachusetts, has been sold to Framingham, Mass. Bill is now a lieutenant in the Army.

▶ Dr. John Eiman, commodore of C.C.Y.R.A., and Clayton E. Jenkins, chief measurer of the class, were honor guests at the annual trophy presentation of the Potomac River S.A., held last month in Washington's Capital Y.C. Commodore Eiman went on record as favoring the continuation of sailing wherever and whenever possible for the duration of the war. He also stressed the importance of holding, during 1943, more sectional regattas for Comets. This is in line with the new policy of the class. The national officers, it was pointed out, are asking regional vice presidents to submit details of district championships within regions.

Dr. Eiman also awarded Potomac River S.A. prizes to Comet skippers at the affair, a dance and supper. To Clarke Daniel, skipper of the fast *Robert E. Lee*, went the first prize. Braddock's *Toby* was second. A third prize was awarded to *Scuttlebutt*, owned by Rear Admiral Edward L. Cochrane, who now heads the Navy's Bureau of Ships.

A total of fourteen Comets competed in the Potomac River S.A. fall series, one of the largest fleets there in several years. From all accounts, it appears that Comet sailing in the Capital should continue at a high peak.

Those were the days!

Pleasure boating is no more, and its suppliers are now in all-out war production. But those days will return, and they will be happier, better days for you . . . for war, with all of its needless destruction, invariably stimulates new ideas, new products. In the marine field, great strides are being made with these improvements, and you will be the ultimate beneficiary. Today we must destroy the forces of destruction, so that tomorrow we may enjoy the satisfaction of reconstructing a better world to live in.

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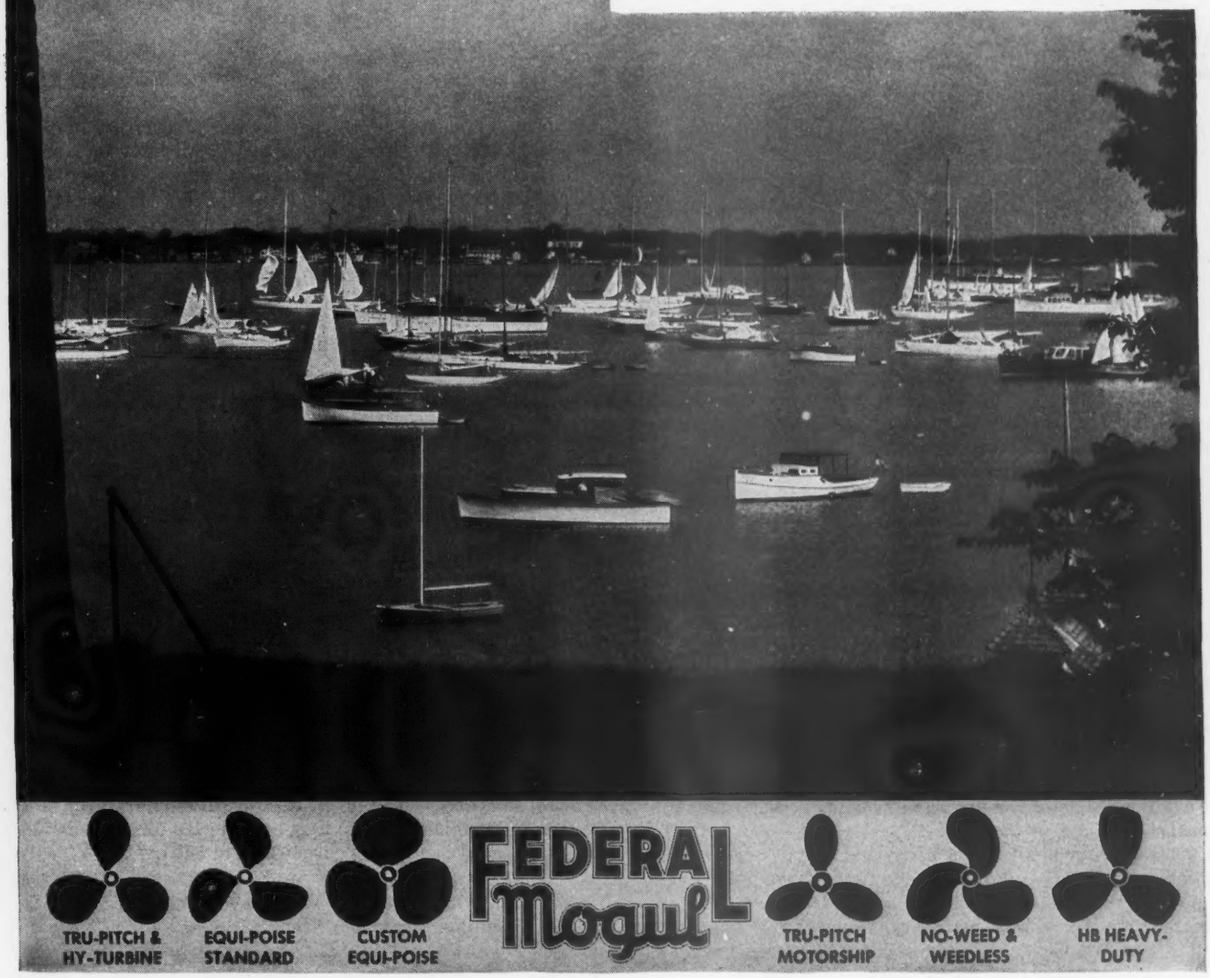

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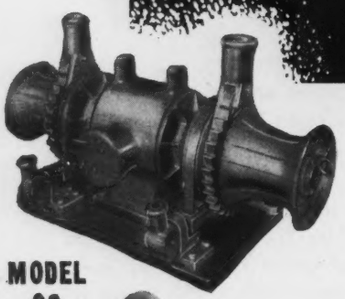

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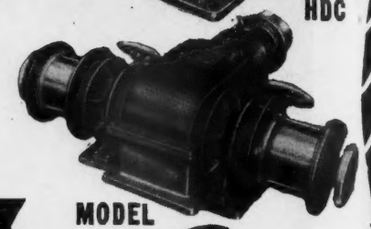
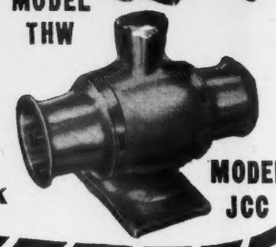


MODEL THW



MODEL JCC

NARRAGANSETT BAY GOSSIP

By Jeff Davis (Old Doc)

▶ There hasn't been so much doing in yachting news for the past month in this particular indentation of the coast line, but we're doing quite well, thank you, in launching other craft that are, just now, of considerably more value than pleasure vessels.

Of course, most of the news may be "military secret" stuff but, as every time one of the builders launches something for Uncle Sam, he takes pains to let the newspapers know he's done it, and as most of the builders who are doing it take pages in the yachting magazines (Bless 'em) to tell how well and how fast they're doing it, maybe I won't be put in jail for life if I confide the information that Herreshoff launched the ninth of the task boats they're building the other day and plans to keep putting them overboard at the rate of one a week for the rest of the winter; that Alder, at Warren, pushed one of the same down the ways a couple of days before I wrote this; that Perkins and Vaughan, at Wickford, launched a 110-footer a week ago; and that Harris and Parsons, at East Greenwich, have the one they first launched about finished and have another nearly ready.

▶ We are also doing pretty well in the line of commercial building. The Rheem Shipbuilding Co. launched the first of 32 Liberty ships November 28th. While the yard started from scratch, even more scratchy than the Oregon Shipyard where Kaiser builds (?) 'em in less than five days, when the *William Coddington* turns her wheel over, headed down the bay on her first trip, Rheem will have beaten Kaiser's time on his first ship by quite a few days, for she was much nearer completion than the first of the Kaiser ships when she slid down the ways and her time at the fitting out pier will be much shorter.

The *Coddington's* engineer is a bit of a joker, and he put one over on most of the spectators. Shortly before launching time, he stuffed a lot of old tar paper under her boilers, lit it and gave a wonderfully realistic imitation of getting steam up. A little smoke came out of her stack and, when a roar came from her whistle that had been hitched up to a tank of compressed air, and her wheel began to turn slowly when it struck the water — they will, you know, if they're not coupled up — we'd launched her with steam up. If you don't believe it, read some of the out of Providence papers.

▶ Then again, on the early morning tide December 7th, Albert Lemos, at Bullocks Point, Riverside, celebrated his birthday by launching the 107′ dragger he's been building for the Atlantic Navigation Co., of Boston. Last spring, the first one he built dropped her hindermost end a bit when her center of gravity got over the end of the ways and it was more than a day before they got her afloat, but this time the ways were longer, the water deeper, and she went over as smooth as an eel slipping through a crack in a wharf. He'll start immediately on the first of a pair of 70′ draggers for the same outfit. Was going to build another 107-footer but can't get engines and machinery for so big a boat.

▶ So, even if there isn't any yacht building now, when the world gets back to something like normal again, we'll have the yards and they'll be in shape to shift back to yacht work.

▶ Frostbiting is out for the duration. Reason? Two of them. First place, it takes gasoline to get the crews and boats from where they are to where they want to race and, second, there aren't enough of them left to make it worth while. Take the last winter crowd. Doc Cobb is getting over pneumonia and won't be able to stand the gaff for a while yet. Mark Hough and Herman Hanson are in the Navy. Dave Scott is doing a scientific job for Uncle Sam and it isn't being done in Providence. Dan Huntley, Billy Schmid and Art (Flub) Williams are in the Coast Guard Reserve. And two or three of the others — no names, please — have decided they're getting too old to enjoy getting cold and wet. So that's that.

First they raced at Bill Dyer's Anchorage in the Warren River. The tide was too tough. Then they moved to the Barrington Y.C., where there was also much tide. Three boats tried it the first time, four the second, and three showed up for the third attempt, and the skippers figured they'd do something else. So they took Harlan Moses' ketch *Pandora* over to Sam Wardwell's, at Poppasquash, and left her there for Sam to haul.

▶ Vic Barlow has bought Ed Tiffany's schooner *Aloha*. He's talking about raising her up and making a flush deck vessel out of her with headroom everywhere below. While planning, he's wishing that she was at Fort Lauderdale instead of Bristol, so he could live aboard while he worked and bask in the well-known climate while he wasn't working.

▶ That "Sailors' Guide" YACHTING told about last month is a Providence

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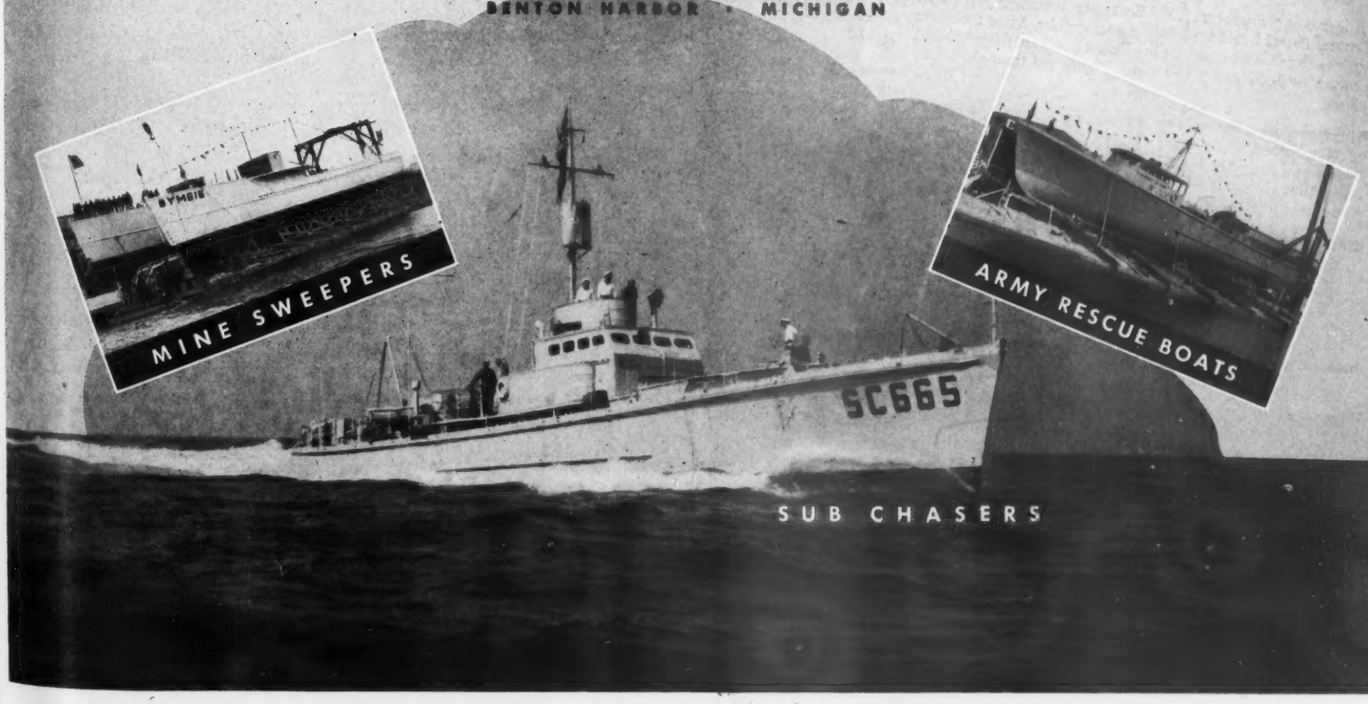

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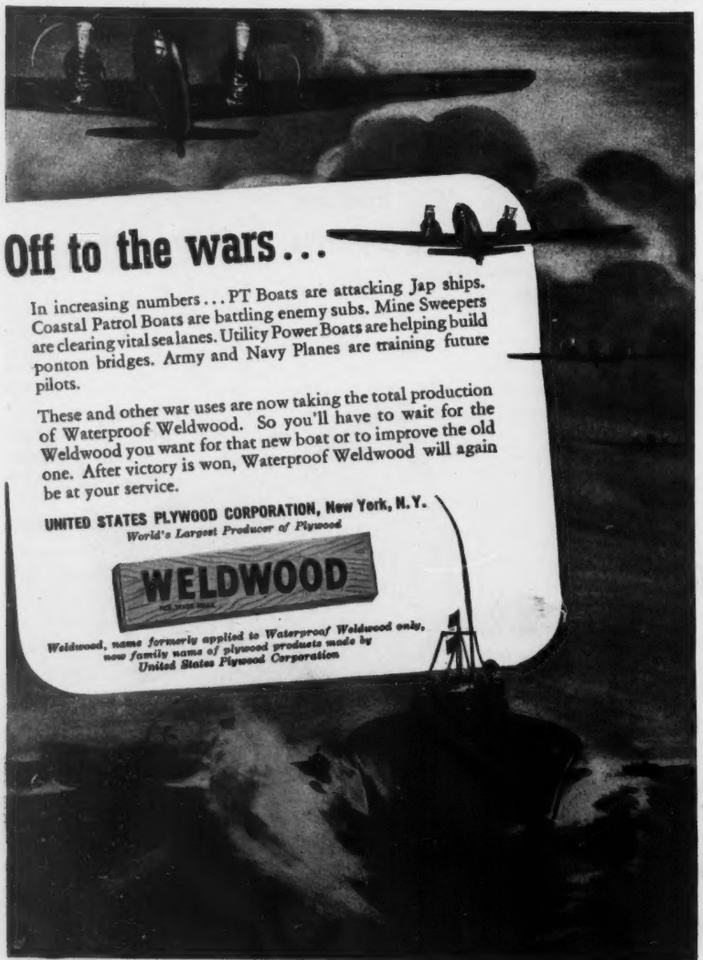
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production (I'm bragging). The bookstores have it and the booksellers tell me that the newly enlisted apprentice seamen in the Coast Guard (and some of the older hands) are their best customers for it.

▶ Doug Paton has bought another one and thinks he's going to keep her and use her himself (Yeah?). She's a 34′ over all auxiliary Friendship sloop that someone brought up from Florida to Westport, where Doug found her. Name's *Tamiami*.

▶ That last intercollegiate regatta, sponsored by Northeastern and sailed in the M.I.T. dinks on the Charles River Basin, needed a certified accountant to keep track of who was who and where they belonged, but it could be done, and was. Twelve colleges sent three crews apiece, all but Brown whose third crew never showed up and one crew had to be split into a couple of skippers who picked up a pair of ten-year-old kids and took them as crews. (Those kids can boast of being college boys once even if they never get into the grammar grades.) The I.C.Y.R.A. board of strategy had all the dope on what the different colleges had done during the season and split them up into four divisions of three each for the preliminary racing in the morning, then took the four winning teams to race for the prizes in the afternoon, while the four second placers raced in a separate division and the four last placers in still another, for glory alone. Harvard and Williams beat Brown in the morning, which put Brown in the "lasters" division in the afternoon, where Brown tied with Boston College and beat only New Hampshire and Worcester Tech, while Harvard covered themselves with glory, spread on thick, beating M.I.T. by 16 points.

CHESAPEAKE BAY ACTIVITIES

By Bugeye Bill

▶ Delegates to the annual meeting of the Chesapeake Bay Y.R.A., held last month in Washington at the Capital Y.C., heard with pleasure a Naval Academy official's approval of the continuation of sail racing on the Bay during 1943 — both for civilians and for members of the U.S. Navy.

Approval came from Captain Kemp Christian, who heads the Naval Academy Yacht Squadron. Said he: "It is the hope at the Academy that the sport will continue on Chesapeake Bay." He stressed the importance of racing, both from the morale and recreational viewpoints.

▶ Lt. Comdr. Clarke Withers, who was awarded the C.B.Y.R.A. high point trophy for the cruising class on the Bay during 1942, told of the enthusiasm shown for sailing by midshipmen at the Academy. Several middies, he said, came to him last month and asked to take one of the yawls for a cruise. Because the boat was not properly heated for winter sailing, the lads had to compromise on a dinghy sail.

Comdr. Withers won the prize for his handling of *Highland Light*, the late Dudley Wolfe's gift yacht to the Academy. The famed cutter scored 1763 points and was the first Class A yacht ever to win the coveted high point designation. The *Light* competed in nine events during the year and, on the whole, made the finest record for the Navy in several seasons.

Dr. Joe Nelson's sloop *Alsumar*, a Class B boat, was second with 1694 points, while Leo P. Rock's little *Valiant*, Class C, was third with 1681. These two yachts also raced in nine events. Dr. Nelson is a member of Gibson Island Y.S., and Rock of the Annapolis Y.C.

▶ Other high point trophies awarded at the meeting were: for Stars, Dave Gaillard's *Flapper* of G.I.Y.S.; Chesapeake "20's", Bill Heintz' *Windward* of West River S.C.; Comets, Lt. Edward Braddock's *Toby* of the Capital Y.C.; Penguins, Walter Lawson's *Potlatch*, Corinthian Y.C.

Delegates elected new officers for the coming year, placing Stanley B. Trott, of Baltimore, a member of the Annapolis Y.C., at the head. He succeeds President J. Miller Sherwood of the G.I.Y.S. Mr. Trott was formerly secretary-treasurer. Sig Hersloff, of the Tred Avon Y.C. on the Eastern Shore, was reëlected vice president.

The new secretary-treasurer is F. Harold Loweree, also of Baltimore, a member of the G.I.Y.S. Named as delegates-at-large of the Advisory Committee were McDonald Wellford, of Richmond, Urbanna Y.C., and Heintz. For the latter it was his second term.

▶ Before adjourning, delegates heard a report from Appeals and Rules Committee Chairman Bob Wayland on proposed changes in the racing rules for large yachts, a report from President Sherwood on C.B.Y.R.A. coöperation with the Coast Guard in the setting up of the offshore patrol of sailing yachts, and a decision to hold the 1943 annual meeting in Baltimore as guests of the Gibson Island Y.S.

▶ Nearly a hundred sailors and their guests attended the annual party of the Potomac River Sailing Association held at the Capital Y.C. late in November. Trophy presentation was the highlight of the evening.

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ON COLLEGE CHARTS

By Leonard M. Fowle

▶ The final big event of the 1942 season was the novel team race regatta staged on the Charles River in M.I.T.'s boats but under the auspices of the Northeastern University Y.C. on Sunday, November 15th. An unseasonable cold snap on Saturday threatened to make the crews break ice before launching their dinghies but the weather moderated considerably early Sunday. The experiment of sailing a series of three- and four-cornered races within the framework of a single big regatta proved highly successful and popular as it accomplished the desired ends of producing some good competition and, at noon, renewing the incentive to all teams by offering a renewed opportunity to win a match.

▶ Four races were sailed in the morning with three-crew teams contesting in three races each. In a seeded draw, Harvard scored 66 points to Williams' 53 and Brown's 42 in Match A. M.I.T. won, 77 against Boston University's 50 and Worcester Tech's 33, in Match B. Johnny Burton led the Crimson sailors with 27 points, tying Johnny Fuller, of Williams, for high point score, and Hal Boericke, of Tech, with 29, was top man in his group. Dartmouth and Coast Guard had a little more trouble winning their morning matches. The Green, led by Warner Willcox with 28 points, prevailed with 61 against 52 for Holy Cross and 45 for Boston College. Coast Guard, overcoming an early deficit, finally scored 67 points to Northeastern's 59 and New Hampshire's 34. Charlie Daniel, with 29 points, was top scorer.

▶ After the regrouping of winners, runners-up and third-place teams for new matches, racing was resumed with four-race, four-cornered matches for the afternoon. Harvard's team of Commodore Dave Noyes, Johnny Burton and Sheff Van Buren, was too strong for its rivals in Match I (which entitled the Crimson to be considered the regatta victor). With Burton again leading the way with 48 points, Harvard ran up a total of 121 points to M.I.T.'s 103 as Coast Guard nosed out Dartmouth, 66–65, for third. Matches II and III were, however, hotly contested. Williams won the former with 98 points to Northeastern's 91, Boston University's 85, and Holy Cross' 81 as Bill Mattern, of B. U. at 43 points, edged Fuller with 42, in high point scoring. Match III was a dog fight between Boston College and Brown with a 105-point deadlock resulting. New Hampshire scored 77 and W.P.I. 64. Jimmy McSorley, of B.C., topped the field with an individual score of 49.

▶ The Navy sailing team, undefeated for a full year, or since the Schell Trophy regatta of October 26th, 1941, was finally given a setback on Lake Carnegie in its last 1942 engagement. Dartmouth turned the trick with a 51¼-point score, but it was a real surprise when Princeton also led the Midshipmen, 41–38. The Green sailors won every race, Warner Willcox capturing four firsts in five starts for individual high point honors at 34 points. George Palmer, of Princeton, with four seconds, did some fine sailing also. Navy's defeat boosted the stock of the New England colleges in any argument on the relative strength of the sailing teams from the two sections, since Dartmouth, which beat Navy without "Bus" Moscacher's services, ranks no better than third or fourth in its own section on the basis of fall and summer regattas.

▶ The Inter-Collegiate Y.R.A. has staged three official, big regattas exclusively for freshman teams in the last 18 months and M.I.T. has won them all, although in each case the Engineers were not the favored team. The regatta on the Charles, November 8th, was no exception as eleven colleges competed with two crews apiece under miserable racing conditions. With identical scores of 45 points (three seconds and a first), Charles Street, ex-interscholastic dinghy champion from Vermont Academy, and Martin Hellar, produced 90 points for a ten-point margin over Boston University's Bill Mattern and Kenneth Robbie, who amassed 80. Philip Hildebrandt and Morgan Dring gave Coast Guard a third with 69, just ahead of favored Harvard (which, it should be noted, lost Doad Danner's services through illness) with 66 points. The other team scores were: Holy Cross, 61; Dartmouth, 51; Brown, 50; New Hampshire, 48; Williams, 36; Northeastern, 33; and Worcester Tech, 27.

▶ There were three late fall dual meets, two at Essington, Penna., in Haverford's new boats, and one on the Thames at Coast Guard. On November 8th, Haverford defeated Stevens Tech in a five-race match by 25¾ to 21½ as Credon Calhoun took three firsts for top individual honors. The following week, in a seesaw match, Drexel eked out a single point margin of 29¾ to 28¾ points. Bill Houston, of Haverford, had three firsts and George Darby, of Drexel, two victories. Crews and skippers were shifted with every race.

▶ Coast Guard's final home regatta, November 8th, resulted in a 41–22 triumph over Cornell in a battle against drifting conditions and a foul tide.

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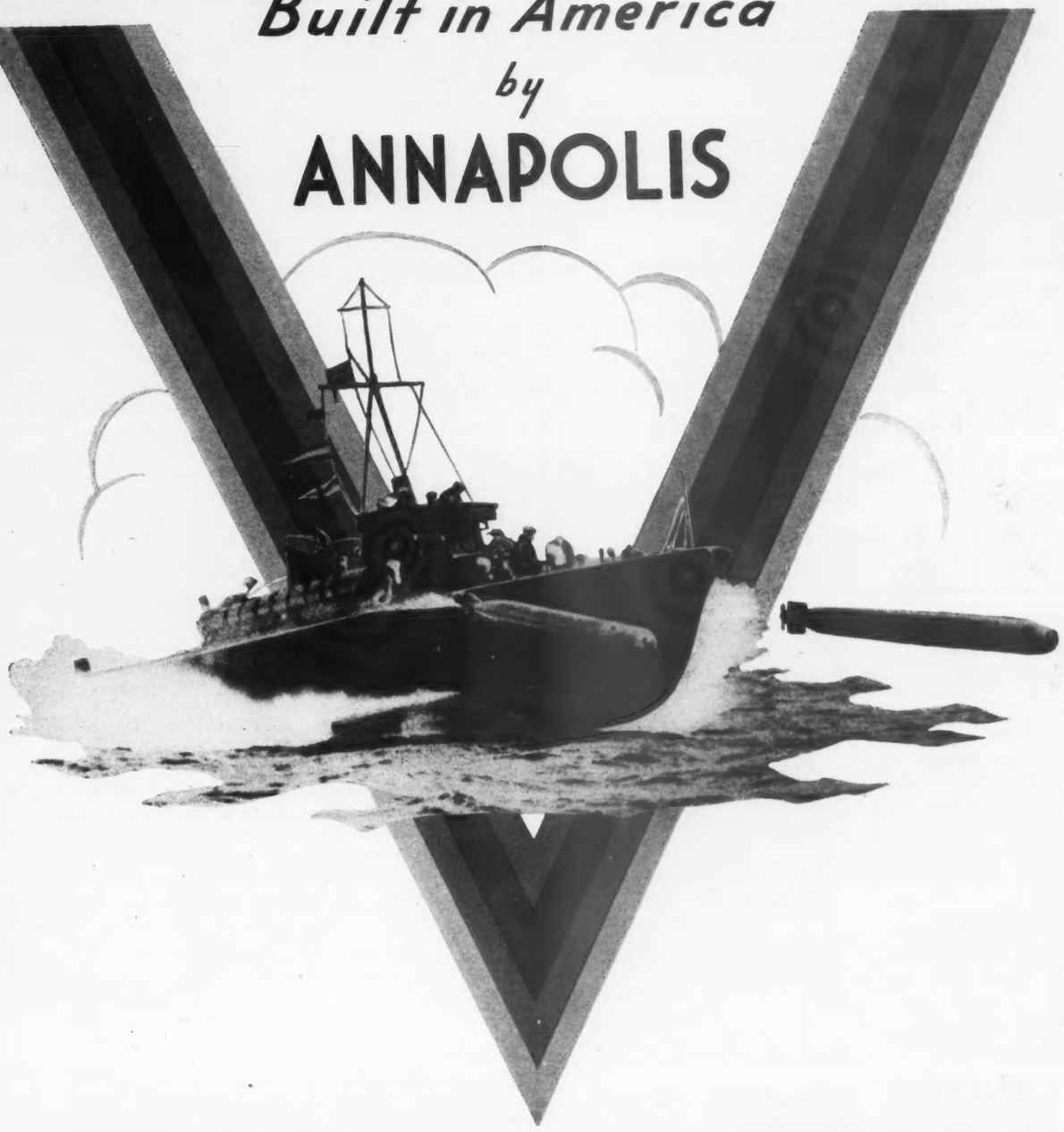

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Clarence Easter was high point man as he collected 16 points for the Cadets but Bill Rothfuss, a Barnegat Bay skipper, showed plenty of promise and skill with his work for the Ithacans.

▶ In the fall racing of the Charles River Basin Intercollegiate Dinghy League, Harvard scored a clean sweep in both the freshmen and varsity divisions. In the varsity division, the racing was close all the way with the Crimson prevailing over M.I.T. only on the basis of the final day's competition. The Harvard skippers were Johnny Burton, Sheff Van Buren, Jack Grant, and Lyman Bullard. M.I.T.'s Ralph Evans, with an average of .689 for 13 starts, won the individual honors over Burton.

The Crimson freshmen had their closest opposition from Boston University although the Community Sailing Association team, in the races it actually sailed, led both outfits, but failure to start in at least 60 per cent of the contests dropped this team to fourth place. Paul Van Buren, of Harvard, with an average of .739 for eleven starts, led in individual scoring. The standings:

Varsity		Freshman	
Harvard	.677	Harvard	.663
M.I.T.	.655	Boston University	.630
Boston University	.598	M.I.T.	.584
Boston College	.555	Community S.A.	.563
Community S.A.	.540	Northeastern	.391
Northeastern	.426	Boston College	.327

MASSACHUSETTS BAY FLASHES

By Ed Earle

▶ The *Gertrude L. Thebaud*, pride of Gloucester and one of the most publicized fishing schooners in the world, wearing her new black-gray war paint, was inducted into the Corsair Fleet of the Coast Guard on December 13th with a special ceremony. The burgee of the Queen of the North Atlantic fishing fleet came down into the waiting arms of Captain Ben Pine, and the commissioning ensign of the United States Coast Guard snapped smartly aloft to the main truck to make her the flagship of the Corsair Fleet. The induction provided a colorful city-wide holiday in Gloucester, billed as "Thebaud Day." A parade, headed by the Gloucester High School Band, Coast Guard, veteran organizations and other military units, marched along Main Street to the million dollar State Pier, where the program was held. Commander Fletcher Brown officially received the schooner from Captain Ben Pine. Following the exchange of pennants, the new flagship of the Corsair Fleet made a trial run down the bay.

▶ The schooner with the modernized lines twice represented the American fishing fleet in the International Fisherman's Races against the big saltbanker *Bluenose*, handled by Captain Angus Walters, hailing from Lunenberg, Nova Scotia. The Gloucester entry won the first race but lost to the *Bluenose* in the 1938 series. *Thebaud* will become the flagship of a large fleet of picket patrol schooners, known as the Corsairs, which forms our outer defense in the anti-submarine campaign. These vessels are manned by fishermen and yachtsmen, who know sail and the waters off this stern and rockbound coast. All Gloucester unites in the wish that their champion will continue her fishing record in this new kind of fishing.

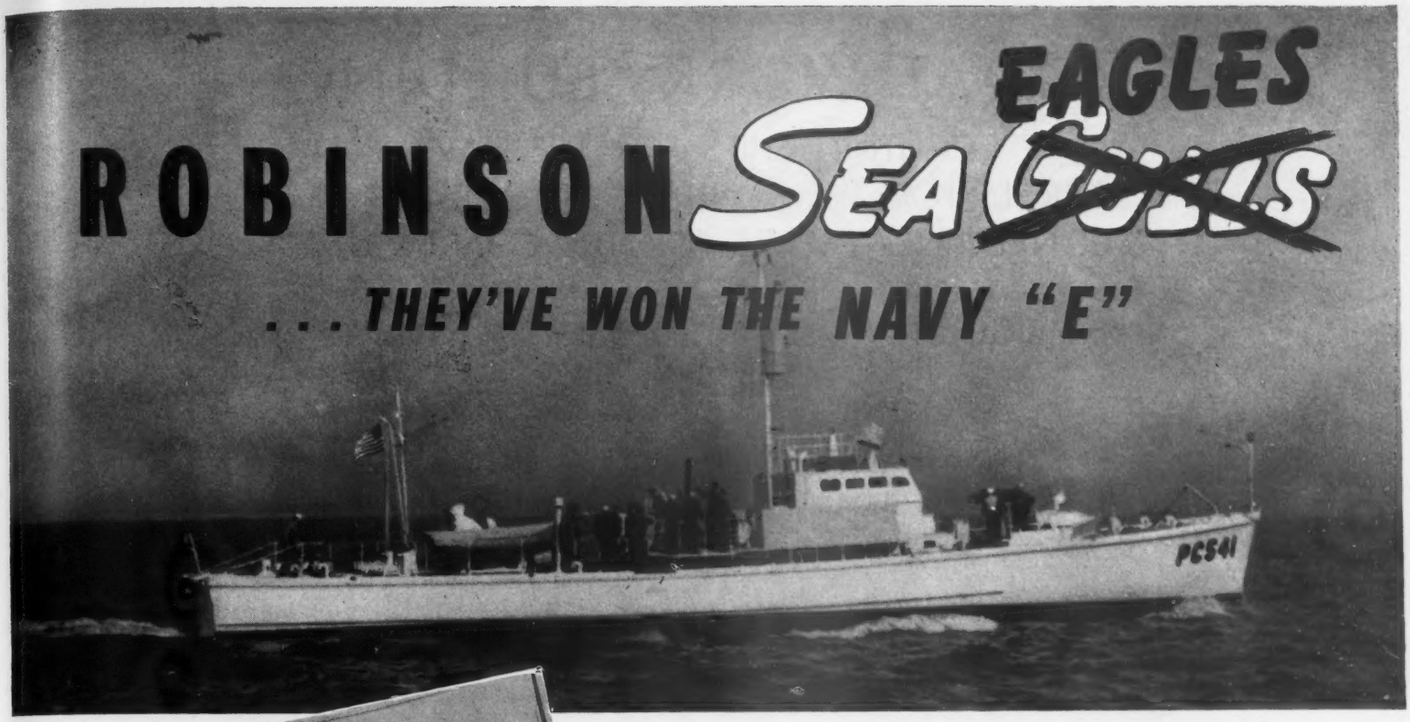
▶ The Corinthian Y.C. nominating committee to draw up the 1943 officers and standing committees is headed by Daniel E. Watson and includes Walter R. Bell, Gilbert H. Hood, Jr., Earl C. Davis and Eugene T. Connolly, Jr.

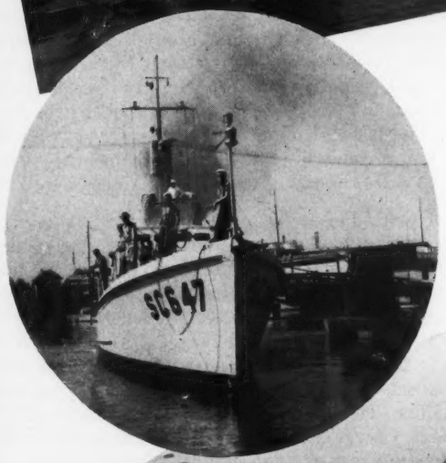
▶ The Massachusetts Bay Hustler Class Association proposes to stay afloat for the duration with the following slogan:

Sticks and stones
May break our bones
But tires and gas
Won't break our Class.

This live wire Association has just published its first official log entitled "Hustling Hustler, Hauling-Out Issue." The officers for the 1943 season include President John J. Kerrigan, of the Quincy Y.C. and Secretary-Treasurer J. Henry Flynn, of the Winthrop Y.C. The Fleet Captains are John Henshaw, Quincy; W. L. Haggett, Lynn; Thomas Ford, Jr., Winthrop; and, D. F. Taylor, Squantum. Hustler members now in the service are John Curtin, Ronnie MacKay and Fred Neal, Army; Ozzie McKenna, Hubert McKenna, Bob Seifert, William Dickson and the three Milne brothers, Navy; Gordon Clorin and Alden Elliott, Coast Guard.

▶ The Hustlers at Squantum enjoyed a great racing year since Quincy Bay is perhaps the only racing bay in this section that was not hampered by restrictions. The Winthrop fleet of 18 Hustlers used a twice-around course because of restrictions. Although seven boat owners were in the armed





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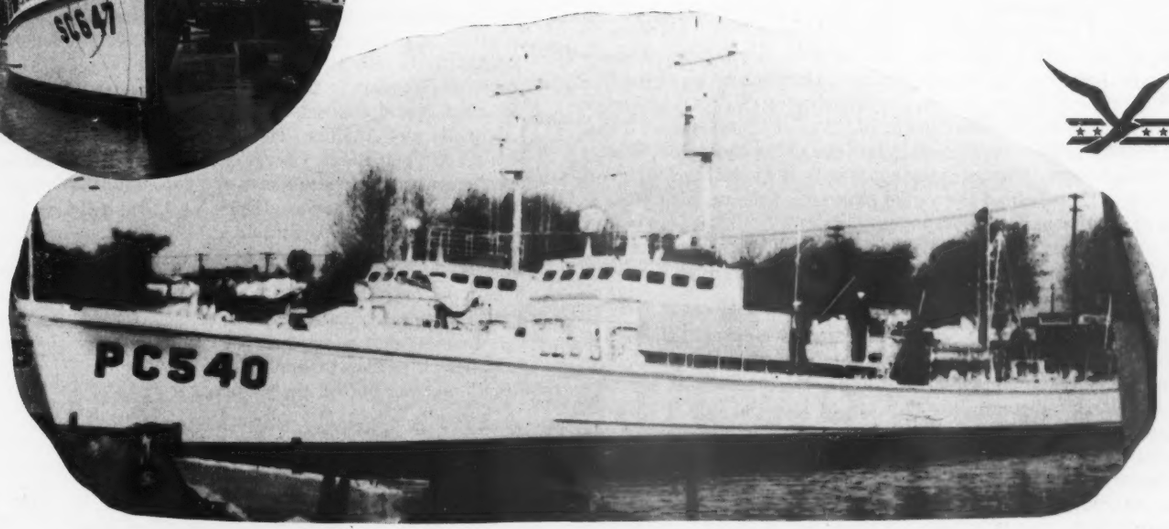

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services, all but two of the boats raced at Winthrop. South Boston and Savin Hill were pared down to one Hustler apiece while Quincy grew from three to five of the Mower-designed craft.

There has been brisk boat selling at the Lynn Y.C. and the loss of four boats has been partially redeemed by two new arrivals.

▶ The 28′ auxiliary sloop *Pirate*, ex-*Solymar*, has been sold to Sidney B. Blaisdell, of Providence, through the office of Eldredge-McInnis, Inc. This is the sweet little boat formerly owned by Jim Hammond, of Peach's Point, Marblehead, who is now a captain in the U. S. Army Air Corps.

▶ A successful Stag Surprise Party was held at the South Boston Y.C. to honor Herbie Donovan and Arthur McGarry of the race committee, two of the most popular yachtsmen in the area, who have done much work for their own club and many other clubs on Massachusetts Bay. This occasion afforded an opportunity to show this pair of veteran officials the club's appreciation of their long, unrecognized efforts. Donovan is one of the top-flight light sail men of Boston Bay in the Manchester 18-Foot Class while McGarry, a veteran racing owner in the old Sonder Class, started a seamanship school for girl skippers several years ago at South Boston, besides developing junior crews. This pair may not always be at the head table but are always the workers behind the varied programs, from running races to completing details for banquets.

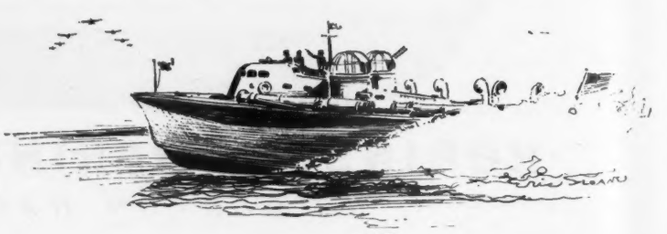
The committee included Chairman John Mesiti, Commodore John E. Murphy, Vice Commodore Tom Watson, Tom Moroney, Ed Call, John Valencius and Jim Lee.

▶ Boston Power Squadron members are taking active parts in the Coast Guard Auxiliary and Coast Guard Temporary Reserve. Bob Shaw has command of the power squadron working out in Boston Bay. At Marblehead, Harold "Puck" Pierce has a class of one hundred taking elementary navigation at Abbott Hall. Harry Whitten has thirty taking the advanced course at the Boston Y.C. J. Abbott Hutchinson is handling the junior navigators at the Marblehead Station of the Boston Y.C. Harold T. N. Smith, Commodore of the Coast Guard Auxiliary, puts in three days a week working for the Coast Guard in the Boston office under command of Lieut.-Commander Roy G. MacPherson. U.S.C.G.R., Director of Auxiliary and Reserve, First Naval District.

▶ The development of the Auxiliary by the salty citizenry, the "pinch hitters" of the fleet, who serve without pay on land and sea along the rock-bound coast of New England, is one of the outstanding feats of the war. A fifth of the membership of the organization hails from the First Naval District. The largest division centers around Boston Harbor. Fifteen per cent of these Auxiliaries have "wet their feet" and gone in all over by enlisting in the Coast Guard Reserve. Eighty per cent are participating part time in harbor patrol, Coast picket, beach patrol and in instruction programs. Five per cent are inactive due to physical reasons, pressure of defense work or are elderly yachtsmen who joined the Auxiliary to lend moral support as well as donating vessels to the Coast Guard Reserve.

▶ The start of the Coastal Picket Group got under way under high pressure and the necessity of getting men and boats to sea immediately was paramount. When the system was shaken down and physical requirements and qualifications were put in, a small percentage of the original group failed to make the grade, which puts Lieut. Commander MacPherson and his assistants into the good picker class. Director MacPherson, who is former commodore of the Quincy Y.C., hands all the credit for the rise of the First Naval District Auxiliary to Lieut. Perry Collins, his assistant; Commodore of Auxiliary Harold T. N. Smith, of the Boston and Corinthian Y.C.; and Lieut. George Stephenson, of the Eastern Y.C., who has been in charge of recruiting men and vessels for the Coastal Picket. Another former Quincy commodore, Lieut. (j.g.) Frank Hendry, is in charge of the Coastal Picket Training Station at Gloucester.

▶ The Auxiliary in its pinch-hitting rôle here is ready to jump into any situation from office work, instruction of recruits and beach patrol, to going out to sea in case of necessity. This district maintains an Auxiliary Ferry Command, which has been functioning with signal success for a year, delivering Coast Guard craft up through the Great Lakes and to any other waterway port in the country.



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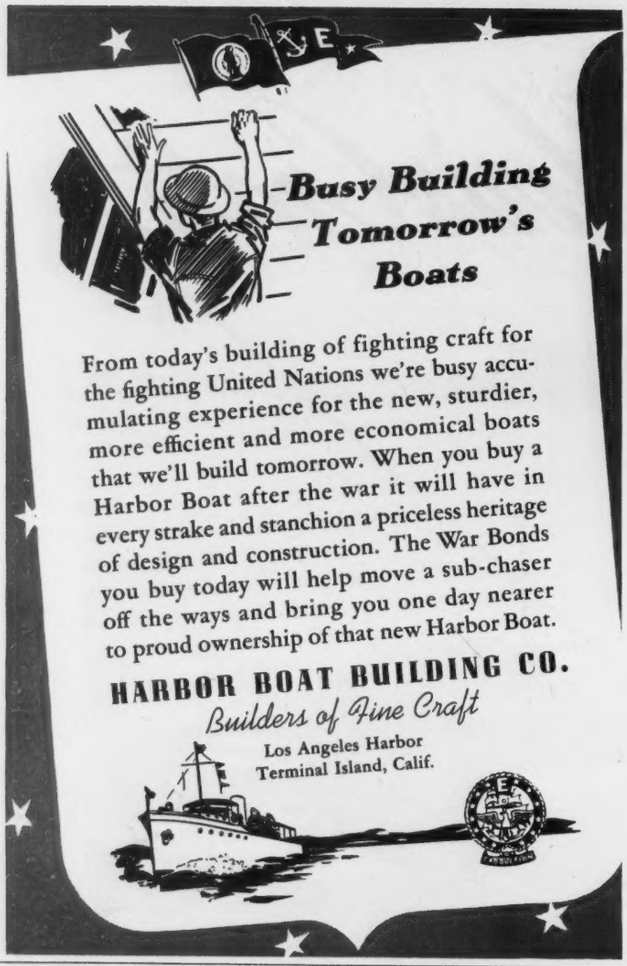
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View of the clubhouse and float of the Southern Shore Y.C. at Jackson Park, Chicago

LAKE MICHIGAN BREEZES

By Warren T. Davis

▶ Over the years certain personalities become tied up with yacht clubs so that, when thinking of the person, we think of the club, or vice versa. George Schaeffer called on your correspondent a short time ago and the following notes about the Southern Shore Y.C., Chicago, and the accompanying picture were the result. During the next few months, sketches of the clubs may be run in the hope that yachtsmen scattered about the lake may come to know more of the smaller or younger organizations.

George Schaeffer was one of those intrepid enthusiasts back in 1912 who started out to make the Jackson Park area of Chicago more useful to power boat men. It seems that back in those days when there were few cars, gasoline was hard to find. The boys had to carry their fuel by hand for some distance. The club, then known as South Shore P. B. C., met at times aboard the old *Santa Maria*, of 1893 World's Fair fame. Taking care of dinghies, getting gas, acquiring a clubhouse were problems then, as now. Much work had to be done to educate the Park Board of that day to the desirability of dredging, allotting space for clubhouse, etc. That educating wasn't so easy.

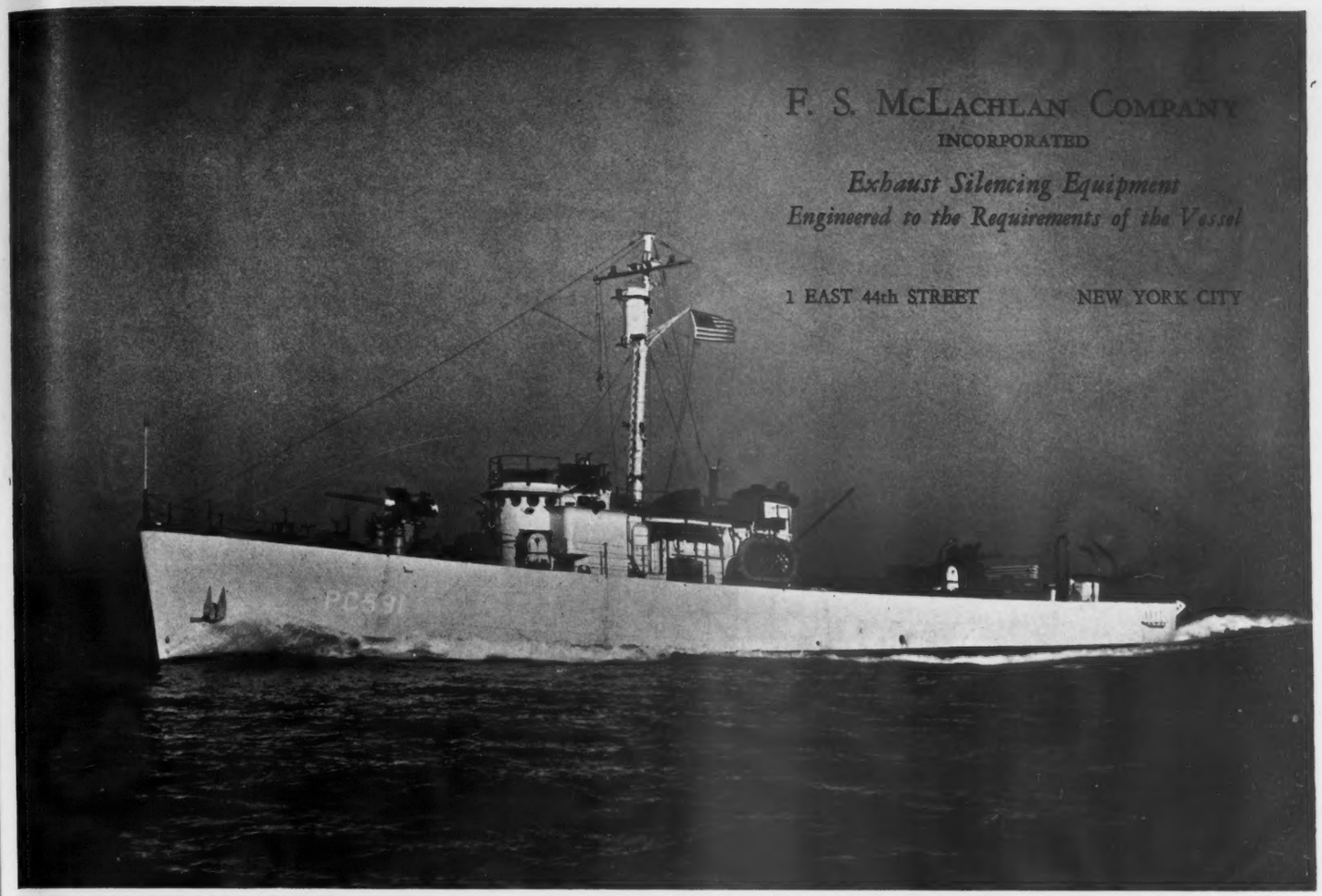
A floating clubhouse that sank and was placed on blocks, to give the appearance to the commissioners of a legally "floating club," was only one of the trials. A legal battle in 1921 between a club member and the Park Board resulted in the courts finding that the Board could not force payment of mooring fees. Along in 1934, the old clubhouse burned. Trouble galore! Then the Park Board, with U.P.A. funds, deepened the inner harbor at Jackson Park, the boys rebuilt their club on solid land and today you can see there the fine clubhouse pictured here. It has 350 feet of landing dock. The club is now known as Southern Shore Yacht Club and its 80 members own 54 cruisers, of which 9 entered the fleet in the past year. Each year the club sponsors the Blake Navigation contest, an event for members only.

George Schaeffer, one of the original members, is still very much alive and active in yachting work and had a great deal to do with the tempestuous and stormy history of this fine club. Think of George, think of Southern Shore; think of Southern Shore, think of George.

▶ Previously a note appeared in this column about the exceptional monthly club news letter edited by Gim Hobelman of the Chicago Corinthian Y.C. Hobelman was recently elected commodore of this very active young club for 1943. We hope the "Squall," as the letter is called, will not suffer any real head winds due to his increased duties. Edward Blinks and Edgar Beaubien were elected vice and rear commodores, respectively, and Edward Schultz, secretary. Forty-two members of the club are now in the service.

▶ Michigan City Y.C. elected officers for 1943 as follows: T. M. Blackwood, Commodore, G. C. Calvert, vice; Lowell Dowdell, rear; P. T. Wineman, secretary; L. T. Noel, treasurer.

▶ Winners' dinners with cups, toasts, gold braid, noise and much kidding ended the first yachting season of the war. There has been a lot of great racing as well as a lot of hard war work. Your correspondent has discovered a possible reason why any man takes a job as commodore. They all seem to get free dinners at the other clubs' winners' dinners. The *White Cloud*



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crew, from Detroit, was on hand at the Chicago Y.C. dinner to take over a raft of medals, cups, etc. for winning the cruising division of the Mackinac. A slight difference of opinion cropped up as to how long it will take for a Lake Michigan boat to bring back the title.

▶ Philo Danley, Skipper of the yawl *Trident*, is the new commodore of the Chicago Y.C. with L. T. Roundtree and R. M. Railton as vice and rear. H. L. Hendricksen and P. S. Hill were reëlected secretary and treasurer. Seventeen names "grace" the list of directors. This club has 52 men in the service. Ned Sheridan, commodore in 1942, writes that the club ended the year with 32 more active members than were on the list at the start of the season.

Season championships at the Chicago Y.C. were taken by Philo Danley's *Trident*, in the Cruising Division; Gould Davis' *Tobasco*, in the R Class; Sam Clark's *Svek*, in the Tumlaren Class; and Heineman's *Romany*, in S Class.

THE SOUTH SHORE OF LAKE ERIE

By John G. Robinson

▶ The annual regatta of the Inter-Lake Y.A. will be held at Put-in-Bay, O., August 9th-11th, with the annual deep water cruising races from Cleveland, Detroit and Toledo scheduled for August 7th and 8th.

▶ Coast Guard Temporary Reserves from the Cleveland, Edgewater, Forest City and Lakeside Y.C. are furnishing eighteen crews of four men each for waterfront patrol duty in and around Cleveland Harbor. No crew serves as a unit but is split up by the Coast Guard regulars so that each patrol will have both regulars and reservists. Each of the reservists get twelve hours of duty twice each month.

▶ Louis B. Pettit, formerly crack light canvasman with Commodore Alex Winton in the Class R sloop *Puffin*, was home on leave last month. Louis is now a second lieutenant in the Army, stationed at New Cumberland, Md.

▶ It's a boy at the home of Mr. and Mrs. Al. Wakefield, of Vermilion Lagoons, and the I.L.Y.A. will not have to worry about future commodore material. The proud father and his father, the late F. W. Wakefield, were both Commodores of the Inter-Lake, the only father and son combination to be honored in the long history of that notable association.

▶ The Snipe Class of the Mentor Harbor Y.C. had the honor of winding up the racing season of Lake Erie. Jack Baker won the final race of the season, his thirteenth first place, but the best he could do in the 45-race series was second place. Howard Morris won the season's championship with a grand total of 1623 points against 1586 for Baker and 1549 for Bob Wilson, who finished third.

Prizes for the season were presented at the annual Snipe Fleet dinner on November 28th.

▶ L. C. Hart, of the Mentor Harbor Y.C., has bought the Abbott Over-Niter *Mist II* from Thomas B. Bolton, of the Cleveland Y.C., which will add another another fine auxiliary to the splendid fleet at Mentor Harbor. *Mist II* is going back home, having been owned, originally, by Stacey Carkhuff, of Mentor Harbor.

▶ The new small boat harbor at White City, foot of East 140th St., Cleveland, was completed too late this fall to be of any service. This new harbor will be turned over to the White City Y.C. by the City of Cleveland and will provide mooring space for at least 200 boats. The entrance is at the eastern end of the harbor and well protected from northwest, north and northeasterly gales.

▶ The War Department engineers have reported unfavorably on the proposed improvements to Vermilion Harbor on the grounds that the cost of harbor entrance breakwaters and upstream extension is not economically justified by the total estimated benefits expected to accrue to the reasonably prospective fishing and recreational boat commerce.

Vermilion commercial fishermen and boat owners have been fighting for harbor improvements since 1937.

▶ James F. Flynn, of Sandusky, was elected Commodore at the annual meeting of the Sandusky Y.C. held late last month. Rolland G. Sloat, last year's rear commodore, is the new vice commodore and Marion F. Yenney is rear commodore. R. Guy Echols is again secretary-treasurer and Dr. Duane D. Love is fleet surgeon. R. Guy Echols, Worthy Brown and Charles M. Mouch were elected to the board of trustees.

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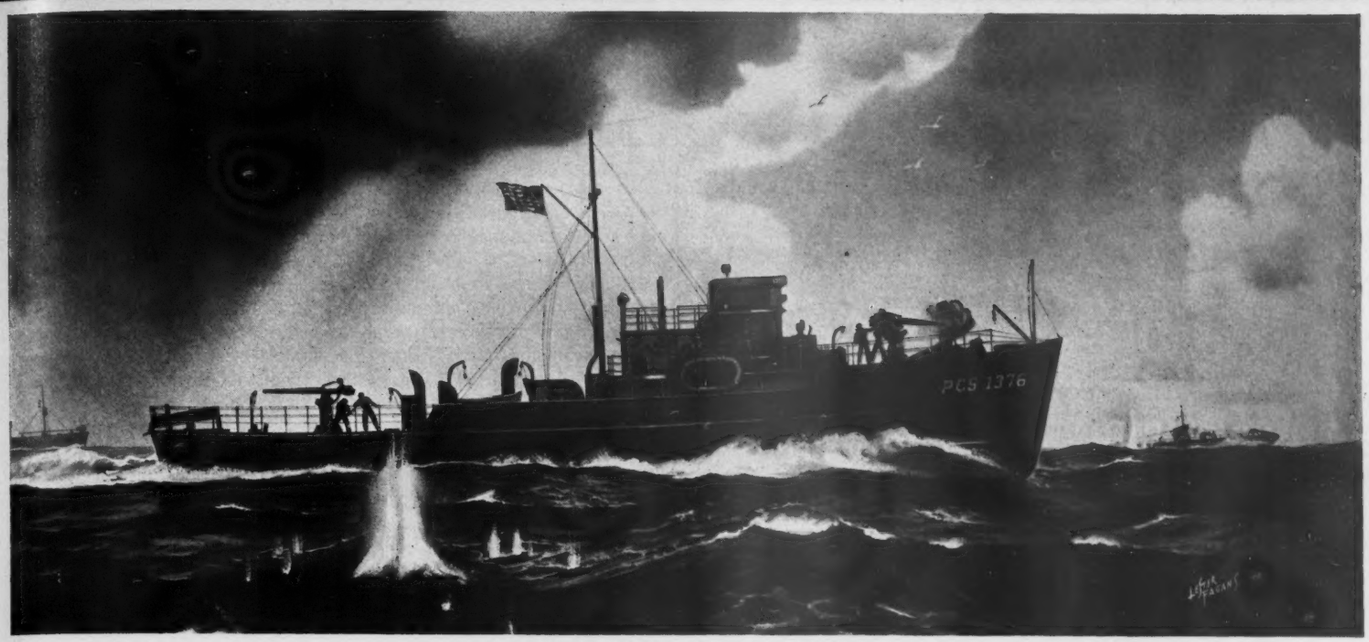

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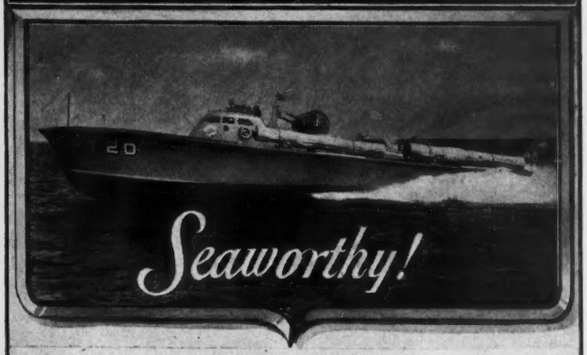

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LONG ISLAND SOUNDINGS

By Starboard Tack

▶ The 12th Annual Invitation Regatta of that sailing organization which knows no central heating, The Frostbite Y.C., takes place in Manhassett Bay on Friday, Saturday and Sunday, January 1st, 2nd and 3rd. Hudson Lemkau, Chairman of the Dinghy Committee of the Manhassett Y.C. — which is playing host to the contestants — announces that the races will take place each day promptly at 1:30, weather conditions permitting. (When weather conditions are not "permitting" to a frostbite addict it is apt to be some weather! Ed.) Chairman Lemkau expects a turnout of 30-odd BO's and a half-dozen D's.

Officers of the Frostbite Y.C. are: E. L. Raymond, Jr., commodore; Robert Fraser, vice commodore; Arthur Knapp, Jr., rear commodore; Ev. Morris (now in Service), secretary and James Moore, fleet captain.

Arthur Knapp reports that there is no lack of enthusiasm among the skippers of Larchmont's dinghy fleet, even though their ranks have been greatly reduced by the exigencies of the war. Fifteen BO's are waging a "do or die" competition, and it is expected that half a dozen more may be in competition by the turn of the year. Whereas the contesting skippers have had to do without the comforting companionship of a committee boat, a first aid (drying out), spare gear shack has been built on one of the club's floats for the committee's convenience.

Mid-December reports received by your correspondent reveal that Howard McMichael was then top skipper, with Jack Sulton crowding him for that exalted position. At Manhassett Bob Fraser was leading the fleet, with Audey Haire close behind.

▶ "A tradition of many years' standing is not a thing to be discarded lightly. And so, despite the war and its many hardships, it has been decided that the Annual, Mid-Winter, Dinner Dance of the United States Power Squadrons will be held as usual." This sensible and heartening bulletin reassures Squadron members that one of their most enjoyable social high spots is definitely charted for Saturday, January 16th, at the Hotel Astor, New York.

Power Squadrons in the New York area are continuing to show a remarkably healthy growth, notwithstanding the inroads made in their membership lists by service in the armed forces. Arthur G. Fink is the new commander of the Bayside Squadron; John R. Nelson will head the Manhasset Bay Squadron in 1943; and William F. Avery is the capable skipper of the North River contingent.

PACIFIC NORTHWEST CAT'S-PAWS

By Ray Krantz

▶ Ripple Rock, called the most dangerous menace to navigation on the British Columbia coast, has been the subject of considerable interest on the part of all Pacific Northwest yachtsmen even though large vessels have faced the greatest possibility of danger when navigating in the rock's vicinity.

News from Vancouver, B. C., early in December stated that the McKenzie Barge and Derrick Co. of that city has been awarded a contract for the removal of the rock, and that a special barge, being built to carry on the ticklish and dangerous job, was to be launched during December. Actual blasting of the rock is not scheduled to begin until March this year (1943).

It was further stated that a dike to divert the currents and lessen the flow in the vicinity of the rock has been completed.

Ripple Rock actually consists of two heads, the shoalest of which lies in the center of Seymour Narrows, British Columbia. This head has a least depth of one and one-half fathoms, while the other head has four fathoms.

Yachtsmen will follow news of the removal of Ripple Rock with great interest, for Seymour Narrows is noted for maximum flood currents of 12 knots, maximum ebb currents of 10 knots, overfalls, heavy tidal eddies and powerful races. It appears certain the contractors for the removal of the rock have undertaken a most impressive and difficult job.

▶ "Clear the ways!" was the order early in December at the Sagstad Shipyards, Seattle, so workers made short work of launching two new 104′ aircraft rescue vessels for the U. S. Army Air Corps. In one of the two sheds at this plant, construction already is well progressed on *LT-186*, a 126′ tug for the Army. By clearing the second shed, it was possible to start fabricating *LT-187*, a similar tug. Working overtime on December 3rd, workers sent *P-216* down the ways *sans* sponsor or ceremony and, on December 5th, *P-217* similarly went into Salmon Bay without any fanfare

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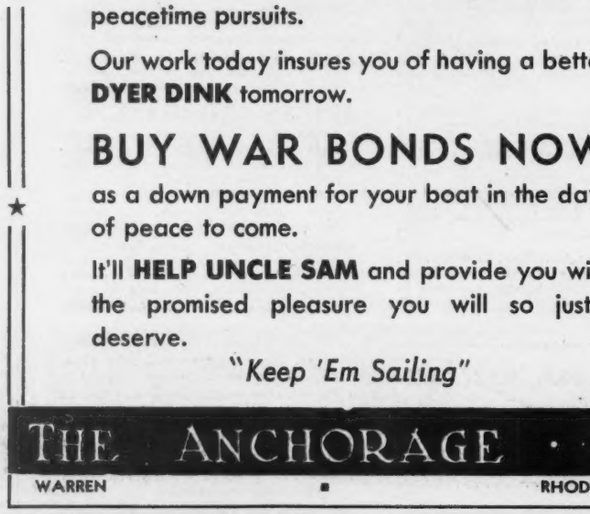

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or sponsor. Thus, this yard now has launched four of the rescue vessels, and work on a new order of "LT" wooden tugs for the Army goes into high gear.

▶ Despite fall and winter weather, Seattle's Penguin dinghy skippers continue to hold races on Portage Bay, this bay being the site of the Seattle and Queen City Y.C.'s. Charles Hickling sailed his *Zipper* to win in the November 29th event for the Sunde and d'Evers Trophy, winding up with 18¾ points. *Webfoot Floogie*, Art Baumgartner, was second with 15 points; and *Water Wagon*, Mike Ernest, was third with 11. Other places in order were: *Capi*, Fred Walck; *Little Lulu*, Norman Blanchard, Jr.; and *Adam's Apple*, Phil Adams.

▶ Five 115′ freight and passenger motor ships for the U. S. Army were launched in rapid succession on November 15th, one after the other, by Northwestern Shipbuilding Co., Washington. This event is considered to have set a record for vessels of this size. Incidentally, the ships were designed by H. C. Hanson, Seattle naval architect.

The sponsors included Miss Dorothy C. Hanson, Miss Marilyn McKay, Mrs. Marian D. Morehouse, Mrs. Marjory Jean Hughes, and Miss Patricia Gilbert.

▶ Speaking of launchings: Three more 135′ wooden mine sweepers of the YMS class hit the water at as many Seattle shipyards late in November and early in December, with more to follow. Miss Nancy Lee, 15, sponsored *YMS-327* at Ballard Marine Railway Co. Inc., on December 5th, to bring to six the number of YMS vessels launched by this yard. On November 21st, Miss Diana Muriel Middleton, 13, christened *YMS-335* at Seattle Shipbuilding and Drydocking Corp. shipyard on Salmon Bay. This was the sixth sweeper to slide from the ways at this yard, also. When *YMS-288* was given her initial dip in the waters of Lake Union on November 28th, by the Lake Union plant of Associated Shipbuilders, workers proudly observed: "Well, there goes Number Eight!" Miss Mary Jane Kerndl, 11, broke the traditional bottle handily, while her sister, Joan Irene Kerndl, 6, played the role of flower girl.

▶ Patricia Parker is the new junior division commodore at the Seattle Y.C., following an election held recently.

▶ S. H. Lowery, of Seattle and Houghton, joins the ranks of boat owners with the recent purchase, through "Doc" Freeman's Fremont Boat Market, of *Barbara Lee*, a 40′ cruiser with a 100 hp. Kermath motor; the boat formerly was owned by C. C. Clough, of the Seattle Y.C. Lowery is living on board.

▶ M. L. Mueller, Seattle, is the new owner of a 31′ Richardson cruiser previously registered to Bennett Baldy, Everett. Phil Donovan, Bellingham, has purchased a 17′ Century runabout for use on Lake Whatcom, and Edwin Pratt also is a new Century boat owner, with a 15′ runabout. These sales were made by Roy W. Corbett, sales manager for Marina Mart, Inc., Seattle. In addition, the 70′ Diesel vessel *Buddy*, with 100 hp. Washington Diesel, was sold by Corbett for the F. E. Booth Co., San Francisco, to the U. S. Army Transport Service.

▶ *Cat's-paws:* The N. J. Blanchard Boat Co., Seattle, has launched five out of seven 65′ Diesel freight boats ordered by the U. S. Army, and preparations are under way to build a group of 45′ picket boats. . . . Ray Butler's Washington Boat Works, completing twelve 50′ patrol boats for the U. S. Coast Guard, will start now on a group of 45′ airplane crash boats. . . . It appears that the Grandy Boat Co., Seattle, will construct a small fleet of 36′ tunnel stern tugboats for Uncle Sam's Army when the sheds are cleared of 50′ patrol craft for the Coast Guard. . . . Vic Franck's Boat Co., Seattle, working on a series of seven 65′ freight carriers for the Army, will keep on working for the Army, with an order for a good number of 40′ motor-sailers. . . . The Hillstrom Shipbuilding Co., Marshfield and North Bend, Oregon, is building three 104′ aircraft rescue vessels for the Army Air Corps. . . . Motor Boat Marina's shipyard at Seattle has completed two unusual 50′ fire barges for the Coast Guard and, by early December, was well under way with an order for 26′ mine yawls for the Army. . . . The Seattle Y.C.'s "turkey shoot" on November 21st brought out a fine crowd; turkeys and hams were the coveted prizes offered by the "wheels of fortune" games. . . . Leigh H. Coolidge, Pacific Coast naval architect and dean of Pacific Northwest ship and boat designers, is now with the marine design division of the War Department, Seattle. . . . The Army's new 126′ tugs of the "LT" class, designed by Coolidge, show the "Coolidge" touch, and they are reminiscent in certain characteristics of the well known Young Brothers, Ltd., tugs of Honolulu, *Mamo*, *Mikimiki*, and *Mahoe*, all of which came from Architect Coolidge's board.

ACTIVITY AT BALBOA

By Velma Barber

▶ During the Annual Meeting of the Balboa (Calif.) Y.C. held December 5th, Fred B. Hunie was elected to serve as Commodore during 1943. Also elected were: Mark Healy, Balboa Island, vice commodore; Alan Craig, Corona Del Mar, rear commodore; Frederick C. Brewer, B.Y.C. (and L.A.), fleet captain; and James M. Lewis, Walnut Park, secretary-treasurer. Staff Commodore F. H. Riesen, San Marino, and Mr. Brewer were elected to serve as directors for three years, filling the vacancies of directors T. Higbee Embry and E. S. Young. Port Captain for the ensuing year will be appointed by the Board of Directors at the January 2nd meeting. At this time the committee chairmen will also be appointed.

Presiding at the annual meeting was the club's retiring commodore, Theodore Johnson, who in a colorful ceremony presented the staff flags to the new officers. In turn, the new commodore presented the fleet captain's flag to Mr. Brewer. Staff Commodore Johnson, recently commissioned a full lieutenant in the Naval Air Corps, joined the colors December 22nd when he reported for duty at Quonset Point, R. I. . . .

▶ Having moved down from Los Angeles, Commodore and Mrs. Fred Hunie are temporarily living aboard their auxiliary cutter, the famous *Indifferent*. Mr. Hunie is designing engineer with a local boat works and last summer purchased a home in Laguna Beach. The new Commodore was in World War I and is now doing duty with the local Coast Guard Auxiliary. He has sailed to Southern Pacific waters on three voyages. The last trip was when the 40-ft. cutter participated in the 1941 Transpacific Yacht Race to Honolulu.

DETROIT RIVER AND LAKE ERIE NEWS

By Walter X. Brennan

▶ Milton Gallup, of Cleveland, was elected commodore of the Inter Lake Yachting Association for 1943 at the annual meeting held December 5th at the Whittier Hotel, Detroit. Commodore Gallup is a member of several Cleveland clubs, having been particularly active in the Cleveland Y.C. and the Mentor Harbor Y.C.

Joe Nagel, a veteran of Detroit River sailing and member of the Edison B.C., was elected vice commodore, and James Beidler, head man of sailing at the Toledo Y.C. for several years, was elected rear commodore. Commodore Harry Kendall, who headed the I.L.Y.A. twenty years ago, was appointed secretary and treasurer for a fourth term.

Regatta dates were set for August 10–11–12 at Put-In-Bay, Ohio, traditional summer meeting place of the organization for 50 years. Dr. Leonard Stack, of Lorain, Ohio, who was to have been commodore of the Association on the Golden Anniversary next year, is on duty as lieutenant commander in the Navy and had to pass up the honor of heading the Inter Lake on the memorable occasion.

▶ A number of Detroit Power Squadron members will go to New York in January to attend the annual meeting of the Squadrons. Both Detroit and Cleveland usually have formidable delegations at the meeting and party.

▶ A J. L. Peters Memorial Trophy has been given to the Detroit Power Squadron by the widow of the yachtsman and steel boat manufacturer. The trophy will be awarded each year to the member who is voted the most valuable to the local organization. A miniature of the award will become a permanent possession of each winner.

▶ Fred S. Ford, whose yawl *Evening Star* was recently turned over to the Coastal Patrol, has bought Dick Graff's Class E *Vixen*, international ice yacht champion for the class last season. The fleet of "Skeeters" at Detroit this year will number about thirty and includes some of the best of the type in the country.

▶ Yachtsmen of the area are planning concerted action to have the gasoline allowance for boats increased. Early inquiries, following the announcement of the allowance, indicated that the authorities planned to make their announced regulations stick at a maximum of 125 gallons for a three-month period.

Local yachtsmen contend that, if gasoline rationing is only to conserve rubber, then there is little reason for cutting down on boat fuel. Crude oil is brought to Chicago, Detroit, Toledo and Cleveland areas by pipe line, where it is refined in waterfront plants. Yachts in all of these areas can really be fueled right at the refineries and boats throughout the Mid-West can be supplied with little loss in rubber.

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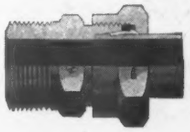

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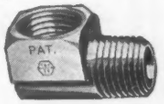

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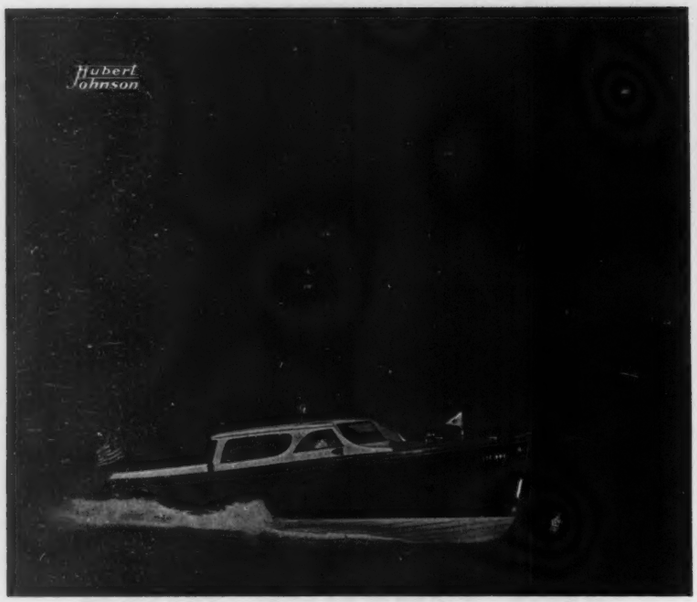

To many a Hubert Johnson yacht now serving the Services, Godspeed and good luck. Recall your noble background: it is the best that careful design and honest workmanship could produce. ▪ We all look forward to the days of peace when we shall again serve yachtsmen with our fine line of boats.

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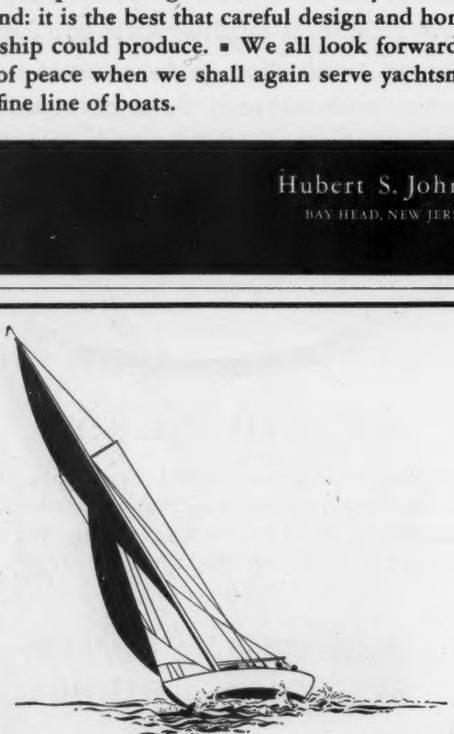
BAY HEAD, NEW JERSEY



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The sponsors of plans for more gasoline for automobiles here got little attention from authorities but the yachtsmen feel that the gasoline rationing argument doesn't hold water in their case.

▶ Ted Kuhn, of Detroit, and Gordon Douglass, of Vermilion, Ohio, are two 14-foot International dinghy enthusiasts of the area who aren't quitting for the duration.

Both are putting in full and overtime on war work and are spending all of their other waking hours building and sponsoring the snappy racers. There are now a dozen of the first line boats of this type in the Detroit-Cleveland area and each builder is completing new boats and reconditioning some older models for an expected increase in interest in the class in the coming season.

BARNEGAT BAY YACHT RACING ASSOCIATION

By Rowland Hazard

▶ The Barnegat Bay Yacht Racing Association ended its 1942 season with the annual meeting on October 21st. This meeting was presided over by Commodore Philip Van Duyne, who retired this year after many years of efficient service through the various offices. The officers elected for 1942 are as follows: Commodore: Victor L. King; vice commodore, Ludwig C. Lewis; treasurer, Herbert W. Nafey; secretary, Rowland Hazard.

▶ Due to war conditions, the number of races was cut to six, and some classes were omitted. Weather conditions were not good, the wind being so light in some cases that the races were not finished in the required time limit; on another occasion, a gale of such intensity blew, that the morning races on that day were cancelled.

▶ The following classes did not sail the past season: Class A, Cat boats; Class E, Sloops; Stars. The records of the other classes are as follows:

Boat	*Owner*	*Club*	*Percentage*
	15-foot Sneakboxes, Class A		
Frisky	Walter Bray	Mantoloking Y.C.	88.0
Sunshine	Harry Storer	Mantoloking Y.C.	85.3
	Comets, Junior Class		
Seaweed	John Benedict (Sailed by Chas. Ill)	Mantoloking Y.C.	91.0
	Moths		
Snig	Lucy S. Lewis	Mantoloking Y.C.	100.0
	Snipes		
Rocket	Gordon Kempton	Island Heights Y.C.	100.0
Solano	Ernest Dean	Island Heights Y.C.	84.8
	Catboats — 17 foot		
Sea Puss	Fred W. Winkelman	Lavalette Y.C.	74.3
Sea Maid	L. C. White (Sailed by Robt. Price and J. P. Humphreys)	Sea Side Park Y.C.	71.4
	15-foot Sneakboxes, Class B		
Foxy	Ruth Fox	Mantoloking Y.C.	94.2
	Sloops, Class G		
Gee Whiz	Robt. Brightman	Bay Head Y.C.	89.2
Mouette	L. H. Rogers, II	Bay Head Y.C.	72.7
See May	Richard D. Hudson, Jr. (Tie for second place — decided in favor of *Mouette*)	Lavalette Y.C.	72.7
	Lightnings		
Fantasy	Jack Wright	Island Heights Y.C.	85.3
Beth	Allan N. K. Stephens	Island Heights Y.C.	83.4
	Comets, Senior Class		
Seaweed	John Benedict	Mantoloking Y.C.	85.0
Alliance	Horace Hepburn	Mantoloking Y.C.	80.7

▶ Many of the permanent trophies for the different classes were not sailed for, some were put in competition, the winners being the following:

15-foot Sneakboxes

Orchard Trophy, *Flapper*, J. Benedict, Mantoloking Y.C.
Archibald Trophy, *Sunshine*, Harry Storer, Mantoloking Y.C.

Snipe

Dickerman Trophy, *Rocket*, Gordon Kempton, Island Heights Y.C.
Turner Cup, *Rocket*, Gordon Kempton, Island Heights Y.C.
Jack English Trophy, *Wasp*, Richard Terhune, Island Heights Y.C.
Edwin C. Berry Trophy (Girls), *Rip Tide III*, Jane Fagin, Island Heights Y.C.

Catboats — 17 foot

Thacher Cup, *Sea Puss*, Fred W. Winkelman, Lavalette Y.C.

Lightnings

California Trophy, *We Two*, L. Stauffer Oliver, Bay Head Y.C.
Jack Wright Trophy, *We Two*, L. Stauffer Oliver, Bay Head Y.C.

WARTIME CARE OF BATTERIES

▶[Practically all industrial machines are now being worked at a tough, grueling pace, 24 hours a day. As war production increases, so does equipment wear. Today, even with top priorities, new equipment of all kinds is hard to get at all, let alone get quickly.

Few people realize to what extent storage batteries are used by every combat, transportation and communication service of our armed forces. Naturally, until they have been passed enough arms and ammunition to finish their hellish job, it is the personal responsibility of each one of us to do our best and make every bit of industrial equipment we work with *last* as long as possible and *produce* to the full limits of its capacity.

▶ A brief picture of what a battery is and how it works has been issued by the Electric Storage Battery Co., and should help all those concerned with boatbuilding, maintenance and operation understand the common sense reasons behind the simple routine required for proper battery care.

What a Battery Is

▶ The simplest form of a modern storage battery is two plates of different metals immersed in an electrolyte. When connected to a circuit, pressure (voltage) is created between the plates. The pressure of each lead battery cell is approximately two volts. Incidentally, the addition of plates to a cell only increases its capacity (amperage); the pressure, two volts, remains the same.

How It Works

▶ *Discharge:* Storage batteries do not store electricity. When a storage battery is discharging, current is produced by the sulphuric acid of the electrolyte combining chemically with the lead peroxide of the positive plates, and the sponge lead of the negative plates. This action changes the composition of each plate to lead sulphate. When enough lead sulphate forms on both plates so that they are no longer of dissimilar materials, current stops flowing. Since the acid absorbed by the plates has, of course, been withdrawn from the electrolyte, the specific gravity of the electrolyte decreases.

▶ *High rate discharge:* During emergency operating conditions, a storage battery can be discharged, without damage, as quickly as wires, motors, etc., will permit (like all discharged batteries it should be recharged immediately). However, more ampere hours can be gotten from a battery by a long, low-rate, or intermittent discharge than by a short, high-rate discharge, because voltage drops faster at the higher rate.

▶ *Charge:* In charging a lead battery, direct current must be sent through the cell in the direction opposite to the current flow during discharge. The charging current breaks down the lead sulphate. Gradually all acid absorbed by the plates during the discharge is returned to the electrolyte. Restoring acid to the electrolyte for use again is the main object of charging. During the early part of a charge, large amounts of direct current can be utilized and acid is returned to the electrolyte quickly. However, as the charge nears completion, there is not much lead sulphate, or acid, left in the plates. Consequently only part of the current can be used for charging, while the rest of the charging current merely decomposes water in the electrolyte, which causes gassing.

Gassing, at any time, shows that the charging current is too high, and should be lowered. *Excessive gassing* wastes charging current and, by loosening and carrying active material away from the plates, shortens battery life.

▶ When charging a battery, cell temperatures above 110° Fahrenheit tend to damage separators and shorten battery life.

Low temperatures *temporarily* lower the discharge voltage and the ampere-hour capacity of the cells. The battery responds sluggishly. However, when normal temperature is restored, the battery returns to its normal voltage and capacity *without recharging*. A fully charged battery will not freeze.

▶ Modern storage batteries are so designed that practically no water evaporates from the cells. The loss is due to decomposition of the water by gassing. No acid is lost in this manner. Enough water should be added to bring level of the electrolyte about ½ inch above tops of separators. Usually, any water fit for human consumption can be put into a battery, but check with us first. Water should be added when necessary, *before charging*, to insure thorough mixing with the electrolyte when gassing occurs near end of charge. This is particularly necessary in cold weather; otherwise water not mixed with acid may freeze and ruin the cell.

\+ + +

▶ The attention required to prolong the normally long life of a storage battery, and keep it fit for its part of your war-time job, is so simple it can be easily understood by new employees. Take care of your battery and it will stand by you during emergency, as well as normal, operating conditions.

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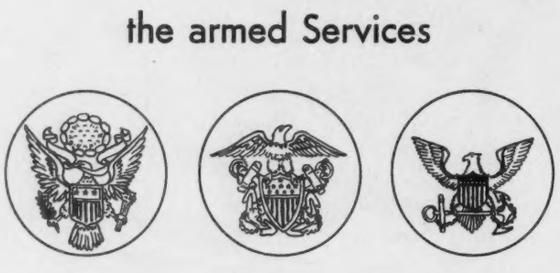

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ADMIRAL LAND URGES YACHTSMEN AID U. S. S. FUND CAMPAIGN

▶ Declaring facilities provided by United Seamen's Service are "acutely needed at this time by officers and men of the merchant marine," Admiral Emory S. Land, War Shipping Administrator, urged American yachtsmen recently to support the U. S. S. Campaign for $6,000,000.

"Yachtsmen," said Admiral Land, "knowing the sea and loving it, are aware of the hazards encountered by sailormen, even in peacetime. With U-boats and dive-bombers making a special target of cargo vessels and transports, these hazards are now greater than at any time in the maritime history of the world.

"The nation's yachtsmen, many of whom are now serving with our naval forces, have had frequent contact with merchant vessels and with merchant seamen in past years," Admiral Land continued. "Further, these yachtsmen, close students of America's merchant marine, have consistently worked for the expansion of our merchant service. Therefore, I feel confident that they will join in the national effort to raise $6,000,000 for United Seamen's Service to the end that the needs of merchant mariners may be met without further delay."

▶ Admiral Land went on to say that United Seamen's Service is a privately-operated, non-profit organization, inaugurated on September 11th last, for the purpose of establishing clubs, recuperation centers and living facilities in home ports and abroad for merchant mariners, officers and non-licensed personnel. He made clear that the organization would not duplicate the work of any existing agency, and said maintenance of the health of merchant seamen, and their morale, was of outstanding importance in the country's war program.

After pointing out that the U. S. S. already operates a number of clubs and recuperation centers in the United States, and a combined hotel and club in Glasgow, Scotland, Admiral Land declared that United Seamen's Service had been launched under the sponsorship of the War Shipping Administration, and had the support of United States Public Health Service, ship owners and operators, the maritime unions, organizations of licensed personnel and representatives of the general public.

FROM THE PACIFIC NORTHWEST

▶ H.M.S. *Lincoln Salvor*, a salvage vessel 183 feet in length and 35 feet in width, and with a displacement of 1300 tons, went down the ways of the Bellingham Marine Railway and Boatbuilding Company, in Bellingham, Washington, November 14th, the largest wooden vessel to be launched in the Puget Sound area since World War I.

The salvage vessel is the first of the BARS type built on the Pacific Coast. She was sponsored by Prudence Talbot, daughter of Mr. and Mrs. A. W. Talbot, of Seattle.

The keel of the salvage vessel is 170 feet long, made of several pieces of carefully selected Douglas Fir, a product of the great Northwest woods which is keeping mills humming twenty-four hours a day to meet production demands. Stems are of oak with a 4″ shoe of oak extending the length of the keel. Framing is sawn oak. The planking is double, both layers run fore and aft. The inner layer is 2″ in thickness, nailed throughout with galvanized fastenings. The outer layer is 3″ to 5″ thick and is through-bolted. An inner ceiling from 5″ to 8″ in thickness and a steel sheerstrake gives the hull further strengthening.

Stringers, shelves and clamps are also employed as they are in large, heavy wooden vessels.

Floor strength is unusually great due to heavy oak floors of ordinary style bolted to the keel. Much strength is obtained in the beam constructions, with beams placed at every frame, through-bolted. The hull is given extra strength by the use of numerous steel bulkheads. Decking is fir, hatch nail fastened throughout. Sheerstrake, covering boards and king planks are fir; rails, bulwark and rail stanchions are steel. The upper deck, bulwarks and house are of reinforced steel.

In the BARS ships, Cooper Bessemer high speed marine Diesel generators supply motive power for General Electric propulsion motors, driving cast bronze propellers through forged steel shafts. Struts — one to each side — shaft bushings, single rudder stocks and rudder quadrants are all fabricated steel. The rudders themselves are solid oak construction.

A steering motor under the aft deck is directly connected to the rudder and is in turn hooked up to the wheelhouse standard by electric controls. Fuel tanks, four in number, are welded wrought iron; water tanks are galvanized. Engine beds are of one-piece welded steel.

The ship has three auxiliary Diesels for lighting and other purposes, with a fuel complement of fire and bilge pumps, power and hand deck winches and other equipment.

Her hull contains approximately 300,000 feet of fir, 15,000 square feet of waterproof plywood and 192,000 feet of oak.

WITH THE U. S. COAST GUARD AUXILIARY

(Continued from page 62)

In several emergencies, when all regular Coast Guard personnel at various units were required to be absent from their stations, the Auxiliary took over the duties at the lifeboat stations and the duties of the watch tower and beach assignments. Throughout the past year, in coöperation with the stations, the flotillas have schooled themselves in the work of these units, and on more than one occasion have demonstrated their ability to serve well in an emergency when called upon, either in maneuvering boats or the performance of other essential duties. Flotillas stationed along the Delaware River have done a remarkable job in surveying defense industries in that area, and in assuring the security of that stretch of water.

The Auxiliary has performed most efficiently in the operation of other duties which normally form the regular routine of the Coast Guard, such as patrolling the bays and, more especially, police work at regattas and races, and other similar peacetime duties. Over 100 assistance reports have been authenticated and sent in to the Auxiliary office, and the members of the Auxiliary have been directly responsible for the saving of many small craft from destruction, not to mention the lives of many men, women and children.

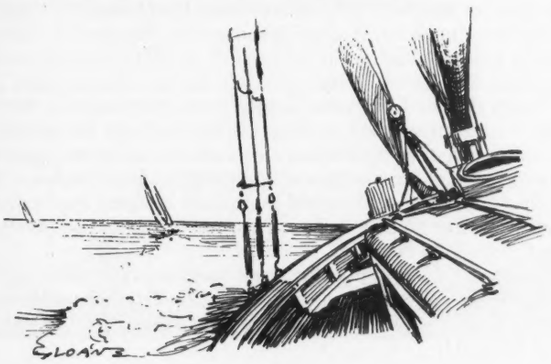
The Auxiliary in this district has provided the regular Coast Guard with many well trained men. Out of approximately 100 men in the Auxiliary who have joined the armed forces, 85 have gone into that branch of the service. This is a valuable fact, inasmuch as many of these men have had two or three years of Auxiliary training and experience prior to their enlistment, and thus require little training in the fundamentals of the work of the regular Coast Guard.

▶ Organized to its present status mainly within the past year, the Baltimore Division of the Coast Guard Auxiliary setup is one of several similar divisions that are included under the Fifth Naval District. Auxiliary Director for this naval district is Lieut. Comdr. Gordon Littlefield, of the Coast Guard, with Lieut. E. G. Cardwell as assistant director.

As under other Coast Guard Auxiliary setups, the Fifth Naval District is broken up into many divisions, including the Baltimore, Washington, Morehead City, Norfolk and others. Heading each division is a captain, vice captain and junior captain, each of whom is now appointed by Coast Guard district headquarters in Norfolk. For the Baltimore Division, Harold M. Cummins is acting captain; E. E. Warren, vice captain; and Henry W. Pippen, junior captain.

Area included in the Baltimore Division is bounded roughly on the south by the Severn River, including Annapolis; to the entrance of the C & D canal on the north; to the south side of Worton Creek on the Eastern Shore for the east and then along the shore line to Matapeake and across again to the Severn. While the area, including streams, creeks and tributaries, from the C & D canal to Worton Creek is all under the Baltimore Division, the eastern boundary from this creek down to Matapeake follows the shoreline and cuts directly across the bays and rivers that may be included in this section of the Eastern Shore.

Making up the Baltimore Division are six flotillas, each headed by a commander, vice commander and junior commander. First of the flotillas is No. 3, at Northeast, Md., headed by T. C. Claringbold, Harold W. Holt and Leslie L. Pippen. Flotilla No. 7 has headquarters at 803 Cathedral St., Baltimore. Commander is Fred H. Hennighausen. Also in Baltimore is Flotilla No. 15, located at the Maryland Y.C., with R. W. Marsheck as commander. M. Francis Taylor, J. H. Bagg and J. S. McClees are commander, vice commander and junior commander, respectively, of Flotilla No. 20 based at Rock Creek. Flotilla No. 31, based at Sue Island, Middle River, is headed by Howard C. Bregel, with H. B. Brown and Joseph Reed as vice and junior commanders. Officers for Flotilla No. 32, located at Annapolis, have not yet been appointed. Commanders of each flotilla combine to make up a division board that coöperates with a Coast Guard officer from Norfolk in mapping out the policy of the unit.



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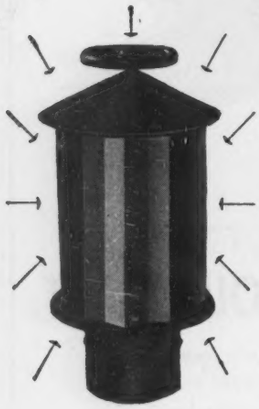
Air-X-Hauster

Patent No. 2269428



SAFE, SURE VENTILATION NO MATTER WHICH WAY THE WIND BLOWS . . . .

Without power consumption, the Breidert Air-X-Hauster provides positive ventilating action. Down drafts are absolutely eliminated. Durably constructed of heavy gauge metal, the Breidert Air-X-Hauster is light-proof (perfect for blackout) and can quickly be made waterproof by turning damper operating wheel. Send coupon for complete information.

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VOSS has been known for over fifty years for the ability to turn out emergency work with speed and precision. At the present time our machine shop is devoted to producing finished materials for the Navy and for builders of Navy craft.

Our large lathes, boring mills and other equipment enable us to turn out complete steel and bronze shafts with bearing sleeves, coverings, cross key couplings and also bronze rudders. We are prepared to bore cylinders in place and to repair every type or make of refrigeration system aboard ship.

Many yacht builders are among our present clients, and our facilities are at the disposal of all builders of ships for Victory. If you have a production problem write, wire or 'phone.

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Electric Searchlights for all sizes of boats

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Burger Boat Company

This YMS may not have what is called an unobstructed deck, but every piece of gear has an important job to do. The large Ideal windlass serves two Danforth anchors in addition to various operational devices

Pointing out that the division is an active one, Captain Cummins states that the present enrollment is around 200 and that more than 50 per cent of the original enrollment of men and boats is now in active service.

At recent ceremonies at the Sue Island base of Flotilla No. 31, high Coast Guard officials, including Rear Admiral R. R. Waesche, Commandant of the Coast Guard, Commander Carl H. Abel and Captain Leroy Reinburg, Commandant of the Curtis Bay training station, were among those in attendance. Flotilla No. 31, according to Howard C. Bregel, its commander, at present comprises a fleet of 40 boats and 88 members. Now rounding out its first year of service, this flotilla has a record of over 50 cases of assistance rendered in relieving the regular Coast Guard patrol, and regularly assigns two of its members to active duty aboard Coast Guard Reserve patrol boats operating the Middle River patrol adjacent to the Glenn L. Martin aircraft factory.

▶ In a recent month, no fewer than 116 small boat operators and owners were sworn into the C.G.A. of the Eleventh Naval District. There are almost a hundred additional applications from purse seiners; each having a C.G.A. crew of five. This will mean five new flotillas added to this district as approximately 375 men are involved, with the number increasing.

The general atmosphere in the Eleventh Naval District is one of determined enthusiasm; especially as the word has been passed down that patrol operations will be extended in the near future.

Sunday, December 6th, saw all the boats and crews of Division 2 (Newport Harbor) reviewed by ranking officers of the Navy and Coast Guard. First Commodore of this district, Lieutenant John D. Roche, has been designated as permanent Staff Commodore of the Auxiliary.

▶ Comparatively few persons realize that Lake Pend Oreille, Idaho, where the Navy Department is now completing a training station, is the second largest body of fresh water lying wholly within the United States. Flotilla 83, C.G.A., 13th Naval District, now operating upon this great body of water, was formed in 1942, with D. R. Riegel as commander, R. H. Graham, vice commander and Dr. F. L. Rosegrant, junior commander. Starting with ten skippers and their boats, the fleet now numbers 36 vessels, with crew members being enrolled daily.

This C.G.A. flotilla is in many ways distinctive, not only because of the fact that it has been dubbed the "Idaho Mountain Navy" but because it will be patrolling the waters adjoining one of the largest naval training stations in the United States. Its patrol area is an inland lake which is approximately 50 miles long with 580 miles of shore line, located in a setting between the towering Coeur d'Alene Mountains of the state of Idaho.

The lake has been laid out in six areas by the flotilla officers, and every boat has been designated a certain area which is shown on a chart. It is the duty of each skipper to become familiar with every mile of shoreline in that area, so they may make landings at night without lights, and also to know the location of every telephone or means of communication that he could use in case of an emergency. In emergency mobilizations, it is intended that auxiliary members will go to their assigned stations and will take over according to their orders. This training should be invaluable in the event of seaplane landings.

While most of the skippers of the boats constituting Flotilla 83 are "dry land" sailors, they are, perhaps, the most enthusiastic bunch of boat owners in the United States. Their flotilla record to date is one of which they may well be proud!

THE 1942 MOTOR BOAT SEASON

▶ With gasoline rationing regulations in the eastern states forcing the cancellation of practically all of the nation's outstanding regatta fixtures, and with many of the leading drivers serving with the armed forces, the 1942 motor boat racing campaign was but a shadow of its former self. Racing activity was confined to southern waters early in the year, prior to gasoline rationing, and to those mid-western and Pacific Coast areas where the use of motor fuel was not restricted.

Five new speed marks were established during the year, however, with three records for one mile trials and two for competition. Top speed of the year was the 77.670 m.p.h. set by Tommy Ince at the wheel of his *Invader* at Lake Elsinore, Calif. on May 17th. This created a new one mile record for Division II of the popular 225-cubic-inch hydroplanes.

Although the Albany to New York Marathon and other outboard fixtures in the East were not held, members of the New Jersey Outboard Association held a series of races, utilizing non-rationed synthetic fuel. Outboard competition through the mid-west and Pacific Coast continued on a limited scale.

▶ Cruiser racing on the Great Lakes and in Pacific Coast harbors retained its popularity, despite the fact that the International Trophy race and the Craig Trophy race, two of the nation's greatest cruiser contests in Pacific waters, were called off.

New 1942 Inboard Speed Records

One Mile Marks

77.670 m.p.h. 225-Cubic-Inch Hydroplanes (Div. II). Set by *Invader* at Lake Elsinore, Calif., May 17. Thomas Ince.
73.781 m.p.h. 135-Cubic-Inch Hydroplanes. Set by *Dinah Mite* at Salton Sea, Calif., October 24th. Bud Meyer.
48.387 m.p.h. Class B Racing Runabouts. Set by *Dragon XV* at St. Petersburg, Fla., March 22nd. Sam Crooks.

Competitive Marks (5 Miles)

48.361 m.p.h. Class C Racing Runabouts. Set by *Saganna* at Miami, Fla., March 1st. Frank Foulke.
45.778 m.p.h. Class B Racing Runabouts. Set by *Dragon XV* at Lakeland, Fla., March 28. Sam Crooks.

1942 Motor Boat Champions

Major Inboard Events and Winners

National Trophy (National 91 Champion, St. Petersburg) — *Tops Pup*, Jack Cooper.
Auerbach Memorial Trophy (Miami) — *Mercury*, Marion J. Cooper.
Hearst Trophy (New Martinsville) — *Tempo V*, Guy Lombardo.
Palais Royal Trophy (New Martinsville) — *Tempo V*, Guy Lombardo.
Pacific Motor Boat Trophy (Salton Sea) — *So Long, Jr.*, Lou Fageol.
Webb Trophy (Springfield, Ill.) — *Tops IV*, Jack Cooper.
International Aquagatta (Buffalo) — *Chrissie IV*, George Schrafft.

Cruiser Race Winners

Pacific Motor Boat Trophy (Oakland-Vallejo) — *Lavilla H*, William V. Heaney.
Hearst Trophy (All Clubs Regatta) — *Miahelo III*, John J. Hallenback.
Mid-Winter Regatta (Los Angeles) — *El Perrite*, Ben McGlashan.
Windy Weather Race (Tacoma) — *Alice May*, Lloyd Waterhouse.

Outboard Trophies and Winners

Eastern High Point Champion — Don Whitfield (amateur)
Eastern High Point Champion — Fred Jacoby, Jr. (professional)
Hearst Perpetual Gold Trophy (Long Beach, Calif.) — Herb Rimlinger
Sammamish Slough Race — Lyn Ivey
New Jersey Outboard Assn. Marathon — Charles Strang

National Outboard Runabout Champions

Harry Combs, Abilene, Texas, C-I Racing
Tom Newton, Santa Barbara, Calif., C-I Service
Clarence Stinson, San Antonio, Texas, C-II Racing
Joseph Leonardo, Hanford, Calif., C-II Service
John Kovacevich, Arvin, Calif., F-I Racing

The time will come, Hirohito

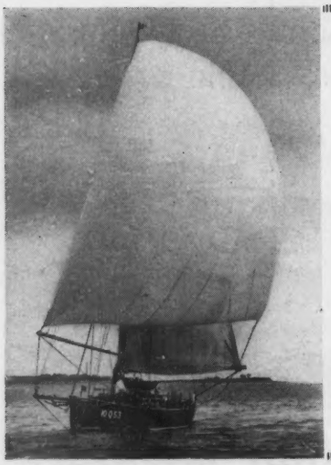
YES, the time will come when boats of every description will have played a major part in the downfall of the war lords of Hirohito's empire. Between now and then we can expect many American vessels to be lost, but they are being more than replaced at a pace undreamed of by Japan. Such magnificent ship production is hastening the day when this company will turn from building mine sweepers to work on pleasure craft.

Stadium
YACHT BASIN, INC.
FOOT OF W. 3RD STREET • CLEVELAND, OHIO

RITCHIE

Production 100%
for the
National Defense Program

E. S. RITCHIE & SONS, INC.
112 CYPRESS ST. BROOKLINE, MASS.



Nylon Fabric for Sails

This photograph, showing spinnaker of Nylon fabric, illustrates the adaptability of Nylon for light sails. Further research in cooperation with the Nylon Division of E. I. duPont de Nemours and Company, Incorporated, is now in progress for use in brighter days ahead.

Ratsey & Lapthorn, Inc.
Sailmakers Since 1790
City Island New York
Tel. City Island 8-1012

A PREDICTION...

While Mack Mariners have changed a lot of ideas of how rugged, dependable and economical a diesel can be . . . what we're developing now under the pressure of war production will make the post-war Macks something to open your eyes and open them wide. That's a prediction *and* a promise!

Mack
Mack Manufacturing Corp.
Marine Engine Division
Long Island City, N. Y.
Pacific Coast Distributors . . .
Atlas Imperial Diesel Engine Co
BUY U. S. WAR BONDS

There is a PENN YAN boat designed especially for you. Whether you use a boat for the pleasure of boating itself or as an accessory to some other sport, PENN YAN has a craft ready to deliver to you that is *tailor made* for *your* particular use.

PENN YAN can meet YOUR MOST EXACTING needs!

A 32 page catalog showing INBOARDS, OUTBOARDS, ROWBOATS, CANOES, DINGHIES, SAILBOATS and special boats for SPORTSMEN including the famous CAR TOP BOAT is yours for the asking.

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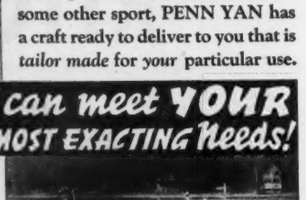


NORTHILL
Unsurpassed Holding Power
ANCHORS
Northill ANCHORS
NORTHILL CO., INC. • INGLEWOOD, CALIFORNIA

One of the latest types of mine sweeper, those tough little ships that are so busily at work clearing the sea lanes

THE DEALER LOOKS TO THE FUTURE

(Continued from page 91)

"The Board will determine the amount of gasoline required for the three-month period mentioned above and will issue to the applicant one or more Class "E" or Class "R" ration books, or any combination of them, containing a sufficient number of coupons to enable the applicant to acquire the amount of gasoline necessary for such period. Any coupons in excess of the number allotted will be removed from the book and canceled.

Sectional Differences

"If an application is made for a Non-Highway Ration for use with an inboard motor boat or outboard motor operated wholly or in part *for a non-occupational purpose* within the limitation area or within any of the states of Virginia, North Carolina, Georgia, West Virginia, Maryland, Pennsylvania, New York, Ohio, Kentucky, Indiana, Michigan, Illinois, Wisconsin, Missouri, Iowa, Minnesota, North Dakota, South Dakota, Nebraska or Kansas, the board will not issue a ration which provides an amount of gasoline in excess of the number of gallons determined by the following formulae:

"(1) In the case of an inboard motor boat, the number of gallons equal to two times the manufacturer's rated horse power of the motor or motors, but in any event not more than 125 gallons;

"(2) In the case of an outboard motor, the number of gallons equal to 2½ times the manufacturer's rated horse power of such motor, but not in excess of 20 gallons.

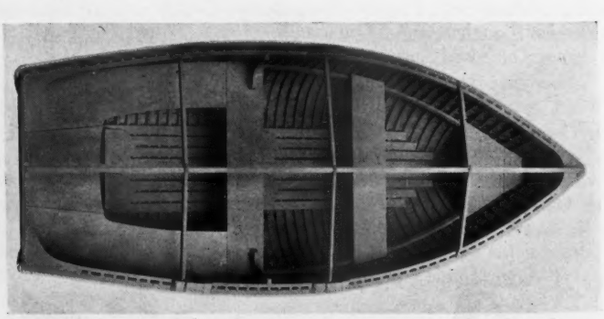
"The Board will in such cases, issue a separate book for such non-occupational purpose, containing coupons in sufficient number to allow the quantity of gasoline so determined, and shall note on such book that it is issued for a non-occupational purpose. For purposes of this paragraph, non-occupational uses shall include use of a motor boat or outboard motor for sightseeing, guiding pleasure parties, or conducting fishing parties other than to procure fish for sale or processing. *The Board will issue the full amount of gasoline necessary for the operation of a motor boat for occupational purposes.*

Special Rations

"The regulations will also provide for the issuance of Special rations for the operation of a motor boat necessary:

"(1) To obtain necessary medical attention or therapeutic treatment, or to procure necessary food and supplies;

"(2) To move such boat in connection with a bona fide change in the regular place of residence of the person entitled to the use thereof; or to return such boat to the regular place of residence of the person entitled to



The great number of small war craft building for the armed services necessitates an even greater number of wherries, like those turned out by Sorg, which are carried on numerous types of naval craft

The Vosper type of motor torpedo boat is being built on both Atlantic and Pacific coasts. This one was constructed by Harbor Boat Building Co.

the use thereof on November 22nd, 1942, if the boat has been continuously away from such place of residence since that date; however, if such place of residence and such boat were, on November 22nd, 1942, within the limitation area, no such ration shall be issued unless such boat has been continuously away from the regular place of residence of the person entitled to the use thereof since August 22nd, 1942;

"(3) To move such boat to a place of storage upon repossession or upon seizure by a government authority;

"(4) To deliver such boat after a bona fide sale thereof, or pursuant to a bona fide lease of ninety days;

"(5) To move such vehicle or boat from a sales establishment or place of storage to another sales establishment or place of storage; however, no ration in excess of five gallons per month per boat shall be granted for such purpose.

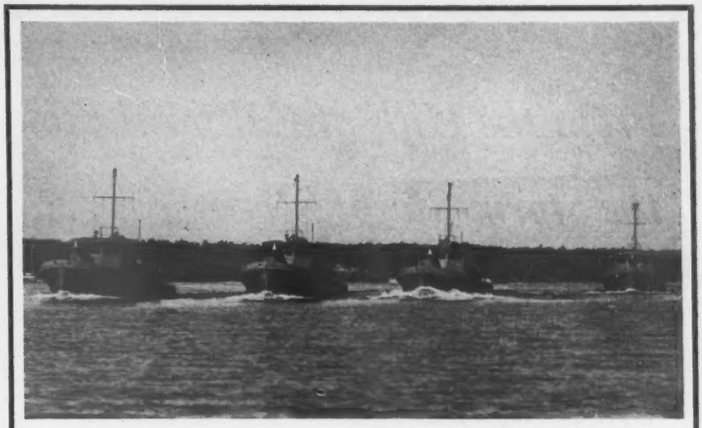
"The purpose of the nation-wide program is the conservation of our rubber-borne transportation facilities. Therefore, in areas where there is no shortage of petroleum products, the program will provide the amount of gasoline necessary for the operation of motor boats since, obviously, they do not use tires. It will, of course, be necessary to control the amount of gasoline issued for such purposes in order to be sure that this gasoline is not used illegally."

From Chase, Parker & Co., Inc., wholesale dealers, of Boston, Mass., came a statement which the editors of YACHTING feel that American yachtsmen can mark well and bear in mind throughout the season of 1943: "We think it will be very possible for the owner to outfit if he will do a little shopping and use a little ingenuity in substitutes."

▶There can be no question but what there are hundreds upon thousands of pieces of gear as well as all types of equipment which have been discarded only because they are shopworn or second hand or, in some way, "not as good as new." Both the dealer and the yachtsman would not only benefit greatly but would directly contribute to the war effort if, as the astute dealer of Boston suggests, a little ingenuity is used in employing substitutes and refurbishing old gear.

YACHTING believes that the whole-hearted prosecution of the war effort is, as it should be, the sole concern of both the yachtsman as well as the man who has made yachting possible — the dealer. But we also contend that the only antidote for unremitting effort is the proper amount of leisure, and that ingenuity, imagination and patience will enable the best kind of leisure to be found, as it has in the past, on our country's rivers, lakes and coastal waterways.

This 110' sub-chaser also hails from the Harbor Boat Building Co. She is said to be the first of the type built on the West Coast



FOR MANY YEARS it has been our privilege to serve the needs of Lake Michigan yachtsmen. In this work we excelled.

NOW, it is our greater privilege to serve our country, working to provide the ships which will bring Victory.

STURGEON BAY SHIPBUILDING & DRY DOCK CO.

Sturgeon Bay Wisconsin

PERKO
KEEPING PACE with the giant strides of war-time PRODUCTION
THAT FREE MEN MAY SAIL FREE SEAS AGAIN
In fair weather and foul, Uncle Sam's vessels are manned by men grim and determined. These men need Equipment they can depend upon.
It is our task to supply them as quickly as possible, which means that all our efforts for the duration go into Equipment for
VICTORY
Then it will be our pleasure to renew our pleasant peace-time relations with America's boating enthusiasts.
Buy WAR Bonds
PERKINS MARINE LAMP & HARDWARE CORP.
1944 PITKIN AVE.
BROOKLYN, N. Y.

☆ ☆

From the Hills of California to the Storm-Swept Seven Seas . . .

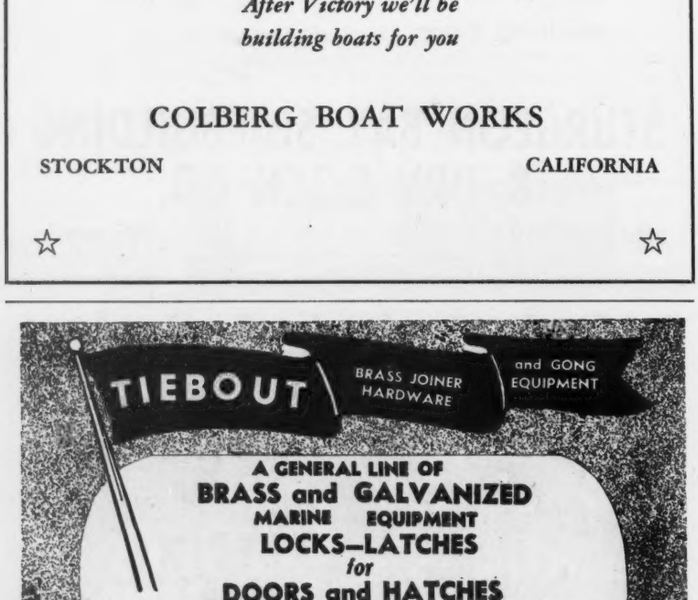
For the past year or so our yard has been busy building ships to sweep the sea — the sturdy YMS minesweepers. Now we are adding to this production line a number of the new PCS subchasers — ships that will strike the enemy U-Boats wherever they are found.

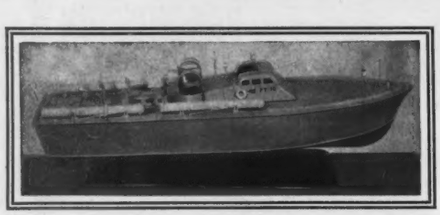
After Victory we'll be building boats for you

COLBERG BOAT WORKS

STOCKTON CALIFORNIA

☆ ☆





COMMAND YOUR OWN PT

"Expendable" in the Philippines, dynamite for Tojo in the Solomons battle, the PT is the Navy's fightingest boat. You can have this realistic scale model 15" x 4½" x 4¾" complete with stand for only $10 express prepaid.

Send for catalogue of other distinctive models

LEBARON-BONNEY CO.
DEPT. Y • BRADFORD • MASS.

H. R. SUTPHEN, FIFTY YEARS IN MARINE INDUSTRY

THE man chiefly responsible for the development of the PT, America's speedy fighting craft, celebrated a significant anniversary a month ago. He is Henry R. Sutphen, widely known to the motor boating world as president of the National Association of Engine and Boat Manufacturers, and directing genius of the Elco Works at Bayonne, N. J. The occasion is Mr. Sutphen's fiftieth consecutive year in the boatbuilding industry. He started his career with the Electric Launch Company, later to be known as the Elco Company. Today he is executive vice president of the Electric Boat Company, America's largest private builders of submarines.

Mr. Sutphen's golden jubilee on December 7th, the first anniversary of the attack on Pearl Harbor by the Japanese, is a striking coincidence, for the speedy PT boats, spreading death and consternation among the Asiatic foemen, are the result of Henry Sutphen's initiative and foresight that made possible the presence of that historic squadron of PT craft in Philippine waters when war began. Today, almost every communiqué from foreign marine war fronts carries stories of new exploits by these fighting craft.

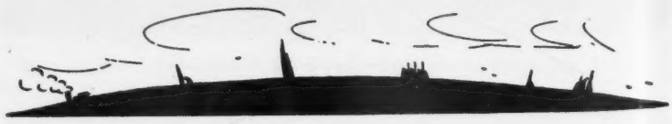
Early in 1939, Mr. Sutphen had gone to England to make a special study of the various types of motor torpedo boats in service there. On his advice, the Electric Boat Company purchased one of these craft and she was shipped to this country in the fall of 1939. This boat was the forerunner of what is perhaps America's most glamorous fighting boat. Mr. Sutphen won the U.S. Navy's approval for this new type of craft, a production contract was entered into and many flotillas were delivered. In September, 1941, one flotilla of these boats arrived in the South Pacific. The rest is history, written by Commander John D. Bulkeley and his gallant fellow officers.

In 1915, representatives of the British Admiralty came here, seeking an answer to the menace of German U-boats. Consultation with Mr. Sutphen resulted in the creation of the 80-foot sub-chaser, to be known in England as the ML. She had a speed of 19 knots and a cruising radius in excess of 800 miles. An amazing production record was created for these craft — 550 of them in 488 days. Sections fabricated here were shipped to Canada for assembly and delivery to England. These boats proved an important factor in curbing enemy submarine operations in the last war.

In 1917, the United States was at war and needed more ships, in a hurry. Mr. Sutphen again had the answer: the first fabricated steel ship. Plates and other parts were provided by bridge building companies and structural steel plants. When these parts arrived at the shipyard, they were readily assembled into a complete vessel. Thus the Submarine Boat Corporation at Port Newark, N. J., was formed and undertook the construction of 150 vessels, each nearly 350 feet in length, with a deadweight tonnage of over 5000. The corporation delivered more than 100 of these ships in one calendar year.

In 1892, Mr. Sutphen started his career with the Electric Launch Company, then located at South Brooklyn, N. Y., building electrically propelled boats. When a new plant was opened at Bayonne, N. J., in 1900, he went there as general manager, and sixteen years later became vice president of the parent firm, the Electric Boat Company.

Mr. Sutphen is a charter member of the National Association of Engine and Boat Manufacturers, joining in 1904 as a representative of the Electric Launch Company. He became third vice president of the Association in 1907 and since 1918 has been president of this organization.



THE SMALL BOAT NAVY IS DOING A JOB

(Continued from page 75)

have been put in place at various harbor entrances and anchorages; a complicated system of convoy control points and challenge ships has been set up and is in efficient operation, and a vast organization — in personnel, probably about a third as large as our old peacetime Navy — has long been in operation.

Most of the key jobs in this organization are held by experienced regular naval officers but, because the majority of our regular officers are vitally required with the fleet in the Pacific and in blue water duties, most of the jobs afloat in the Inshore Patrol and in other elements of the Eastern Sea Frontier are handled by reserve officers, some with only brief experience.

Many of the officers and men started — like the nation — as amateurs at the art of war, but they are fast becoming professionals, and many of them have earned the right to be called veterans. Some day, when the full story of our war against the submarine and the mine can be told, America will be as proud of these men who toil in coastal waters as it is of those engaged in the more dramatic battles on the high seas.

(Certain sections of Mr. Baldwin's article are from a series which appeared in "The New York Times," and are here published by permission of the editors of that publication. ED.)

"ENGINES, ENGINES AND MORE ENGINES!"

(Continued from page 80)

Kermath Manufacturing Co., Detroit, Michigan.
Engines for aircraft rescue boats for the Army, motor torpedo boats, landing boats, barge and lighter pushers, target boats for the Army and picket boats for the Coast Guard, M.T.B's for Lease-Lend construction.

Lister-Blackstone, Inc., Milwaukee, Wisconsin.
Diesel marine auxiliaries for mine sweepers, trawlers, invasion, cargo, patrol, tug, tow boats, and tankers. Production was increased 160 per cent in 1941, and the increase is estimated to be 300 per cent in 1942.

Lorimer Diesel Engine Co., Oakland, California.
Direct reversing and emergency generating sets for the Navy, Maritime Commission, and for vessels being built under Lease-Lend. Production was increased 25 per cent in 1941, 100 per cent in 1942 and is estimated at 300 per cent for 1943.

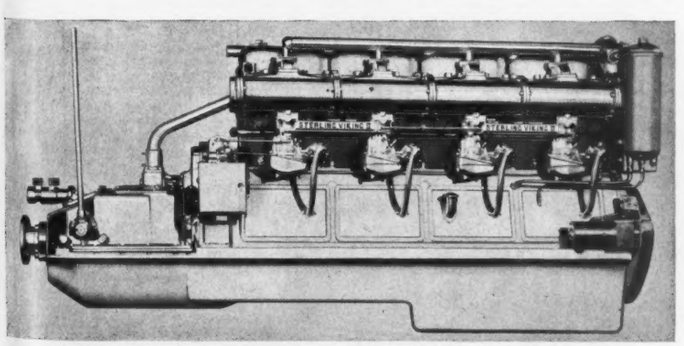
Mack Mfg. Corp., Marine Engine Div., Long Island City.
Engines for landing boats for the Navy.

Osco Motor Corp., Philadelphia, Pennsylvania.
Engines for patrol boats for the Army.

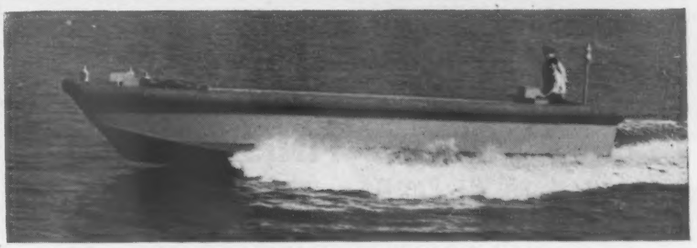
Packard Motor Car Co., Detroit, Michigan.
Engines for motor torpedo boats for the Navy and aircraft rescue boats for the Army.

Red Wing Motor Co., Red Wing, Minnesota.
Engines for buoy boats for the Navy, and surf boats for the Navy.

Scripps Motor Co., Detroit, Michigan.
Engines for various boats being constructed under Lease-Lend contracts.



The Sterling Viking is produced for ships of the United States Coast Guard. Sterling production increase over 1940 is estimated at 700 per cent



U. S. NAVY PLANE REARMING BOAT

VICTORY FIRST!

Our facilities are now devoted entirely to the building of boats for the Army and Navy.

When the war is won, we will again produce a fleet of fine pleasure boats even better than those which have been so outstanding in past years.

LYMAN BOAT WORKS 1550 FIRST STREET SANDUSKY, OHIO

TIME *is Essential*
DON'T WASTE TIME AND MANPOWER
ON MATERIALS THAT WILL NEED TO BE REPLACED TOO SOON
USE
KUHLS ELASTIC SEAM COMPOSITION GLUES-CEMENTS PRESERVATIVES
for LONGER HARD SERVICE

"KUHLS"—14 GREAT PRODUCTS
ELASTIC

ELASTIC SEAM COMPOSITION—For Deck & Hull Seams
SEAMLAST—Mastic type seam filler (Anti-fouling)
SEAM PAINT—A Seam Primer
CANVAS CEMENT—Cementing Canvas, Linoleum, etc.
"AVIO" AER-O-NAUTIC LIQUID MARINE GLUE
BEDLAST—For Bedding, Mouldings, Hardware, etc.
CANVAS PRESERVATIVE—Waterproofing Canvas, etc.
TROWELAST—For surfacing Wood, Iron, Steel Hulls, etc.
INSULATION CEMENTS—For cementing fibrous glass insulation, cork board, etc., to iron, steel and other materials.
BRUSHLAST—Applied with brush for cracked canvas decks and all other resurfacing.
CAULKING COMPOUND TYPE I—For caulking metal seams and joints. Fed. Spec. 52-C-12a.
CAULKING COMPOUND TYPE II—For sealing airports. Fed. Spec. 52-C-12a.
DOUBLE PLANK CEMENT—A waterproof elastic cement used between double planking.
WATER and RUST PROOF CEMENT—For fastening linotile, linoleum on steel decks, steel adjacent to wood and as a rust preventive.

Our Technical Department will be pleased to furnish specifications, or any other technical data pertaining to application, uses and quantities needed of Kuhls products

H. B. FRED KUHLS
65TH ST. & 3RD AVE. SINCE 1889 BROOKLYN, N. Y.

RUMFORD

MARINE FINISHES

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— *and then*, when the war is won, buy the "Gold Medal" yacht chairs you will need and want. Dependable, comfortable and styled in good taste. Ideal aboard or ashore. Ask your Marine Supply dealer. He has "Gold Medal" or will get them for you.

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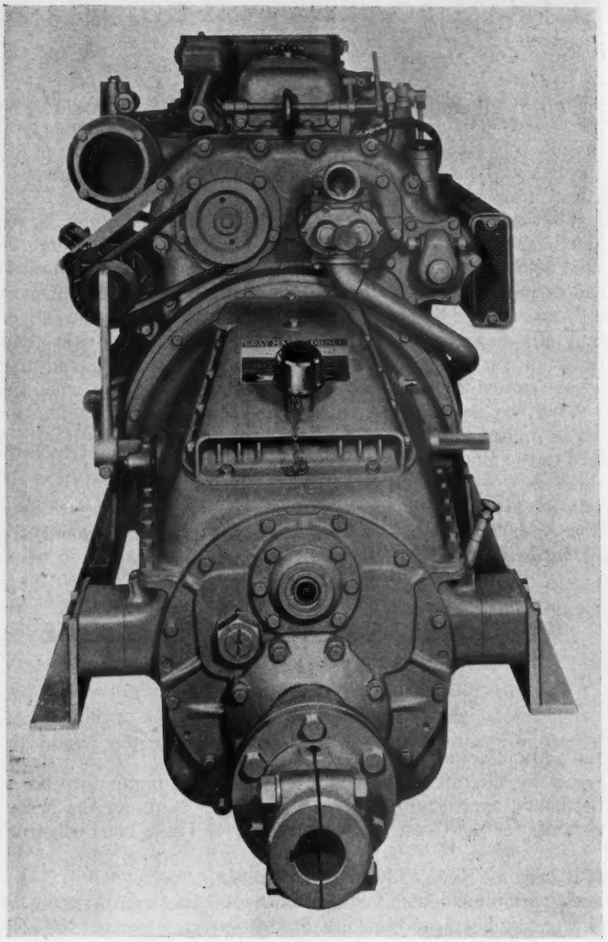

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The National Supply Co. (Superior Engine Division), Springfield, Ohio.

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United States Motor Corp., Oshkosh, Wisconsin.

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Universal Motor Co., Oshkosh, Wisconsin.

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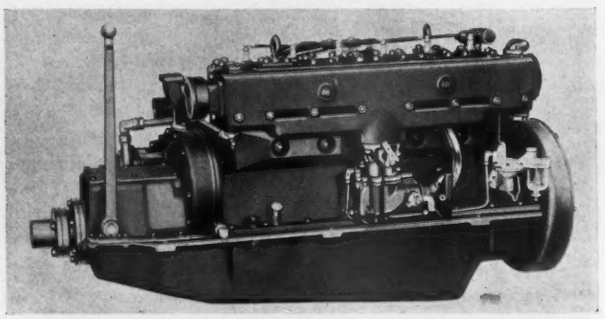
Caterpillar Tractor Company, Peoria, Illinois.

Diesel-electric sets equipped for remote control in pilot house of radio room with automatic starting in case of main ship service failure. For vessels of the Navy and the Maritime Commission.

Universal is building mass quantities of engines such as this for the United States Navy



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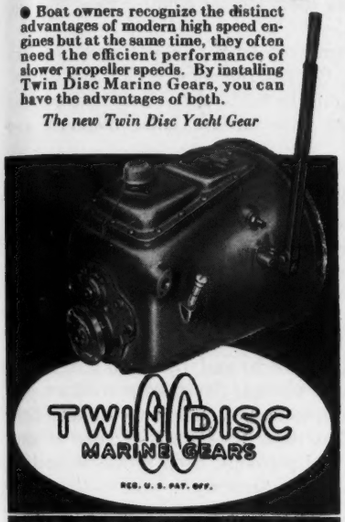

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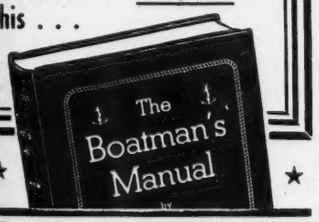

THE BOATMAN'S MANUAL

By CARL D. LANE

IN concise, direct language and with hundreds of helpful drawings this volume presents a full course in coastwise navigation, detailed advice on the handling of *all* types of boats, a complete course in sailing, new and simplified signaling charts, tune-up and trouble-shooting advice for all types of marine engines, etc. THE BOATMAN'S MANUAL is the first volume of such scope, clarity or comprehension available to the coastal or inland boatman. The ideal guide for yachtsmen, it is equally valuable to Coast Guardsmen and merchant and naval sailors. Covers and binding waterproof, pocket size to fit sea bag, reefer pocket or small boat book rack. 596 pages. Profusely illustrated. $3.50

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"BOOKS THAT LIVE"

U.S.N.R. MIDSHIPMEN'S SCHOOL AT NEW YORK

▶ Three years ago, the U.S. Navy's officer complement was 10,000 men. Some idea of our fleet's incredible expansion under the burning prod of war may be gained from the fact that the largest of our naval training schools turning out ensigns for immediate sea duty now contribute officers at the rate of over 7000 yearly to the bitter war at sea. Although today's fleet, like yesterday's, is built around a nucleus of Annapolis men, it is schools such as the U.S.N.R. Midshipmen's School, New York, that have made possible the United States' multi-ocean Navy of tomorrow.

In uptown Manhattan, New York's U.S.N.R. Midshipmen's School has grown in its two years of existence from a class of 299 men to a midshipman regiment of 2600. Formerly confined to the training ship *Prairie State*, the Naval center has overflowed into three nearby Columbia dormitories. The V-7 officer candidates enter as apprentice seamen, become midshipmen after three weeks of indoctrination. Three months later, survivors of a furiously condensed course in naval warfare's fundamentals are commissioned officers on their way to active duty on every one of the seven seas.

They hear plenty of jokes about saluting doormen, about "Ninety Day Blunders" — but these are the men who, in spite of inexperience, are manning battle stations like veterans, from Casablanca to the Coral Sea. Even back at Pearl Harbor, it was recorded that, of 26 ensigns commended for heroism in that blinding attack, seven were products of the small school aboard the *Prairie State*. That school has now mushroomed into a far more potent nemesis for the Axis fleets.

▶ The Midshipmen's School aboard the old *Prairie State* got its start as an emergency measure after France's fall in the summer of 1940. The ship was the former U.S. battleship *Illinois*, pride of the Navy in the days of the Great White Fleet, which had been converted into a floating armory by New York State in 1924. Tied up at 135th Street, North River, with her massive armory superstructure looming above the West Side elevated highway, she was easily the most nondescript vessel in the fleet. Yet, in the 16 months prior to Pearl Harbor she went quietly about her work, turning out over 1500 officers whose presence in the fleet was soon to prove invaluable.

When war came, the Navy immediately set about expanding its emergency officer school. The dormitories and classrooms of Columbia University were just 20 blocks away from the *Prairie State's* North River berth, and soon arrangements were made for taking over some of these. Captain John K. Richards, U.S.N., was appointed to the present post of Commanding Officer in January, 1942. Seven months later, there were 2500 midshipmen preparing for sea duty at the school, occupying Furnald, John Jay, and Johnson Halls as well as the crowded *Prairie State* quarters. The whole unit became the U.S. Naval Reserve Midshipmen's School, New York, the largest V-7 school in the country, a swarming center of Naval training activity that kept its students on the hop 16 intensive hours each day.

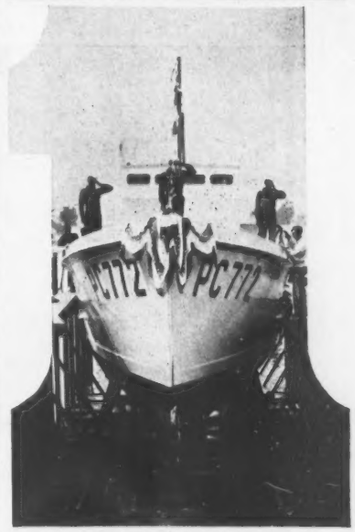
All of the Reserve Midshipmen are college graduates. Consequently, it has been possible to condense the course they take into a prodigiously crowded three months' period of instruction. In this short time, it is not possible to turn out completely trained Naval officers; but the men can be taught the basic fundamentals of the Naval profession's technical side.

▶ Originally, a month-long cruise on a battleship served to indoctrinate V-7 candidates in Navy routine. Even before the outbreak of war, more pressing demands on our battlewagons brought a halt to this means of training. Now, the apprentice seaman training is given directly at the Midshipmen's School. During the first three weeks, marching drills, practice in pulling whaleboats, and gun drills are held in abundance. All students take a special math course which prepares them for later navigation work. A "Navy and Ships" course develops the broad outlines of Navy nomenclature, customs and traditions, the principles of Naval leadership.

As apprentice seamen, the men are under close scrutiny. Personal interviews, aptitude marks, math grades, and physical examinations, enter into the process of selection. Only those who possess definite officerlike qualities are allowed to continue the training.

The men are sworn in as midshipmen upon completion of their first three weeks, and start working as they've never worked before on three stiff months of academic work. 90 per cent of the officers-to-be are seeking deck officer commissions; they study navigation, seamanship, communications, ordnance, and damage control, averaging four hours of classes, six of study per day. Aspirants to engineer-officer commissions take electrical engineering, boilers and auxiliaries, construction and main engines, and naval administration. All midshipmen participate in frequent physical drills, first aid classes, boat and gun drills.

Technical Navy films are employed with great success to supplement classroom instruction. By this means, students are aided in visualizing the knotty problems of celo-navigation, charts, identification of enemy air-



NUMBER ONE JOB

America's number one job today is to win the war . . . all our energies must be devoted to this single objective. As boat builders, the people of the Peyton Co. are turning out vital sub chasers for our fighting Navy . . . as Americans they are buying war bonds at a rate that has won them the coveted Minute Man Flag

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Now keeping bottoms of small, fast, U. S. fighting craft sound, smooth, free from teredoes and marine growths. Resists wear — saves haul outs.

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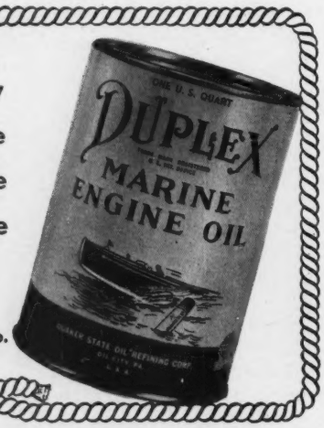

Quaker State Oil Refining Corp.
Oil City, Penna.

craft, the defense against submarines. There is not time to teach everything that is taught at the Naval Academy; but what is taught is modern, up-to-date, and eminently practical — it has to be. After all, these men may be firing an Oerlikon at a Focke-Wulf a month after first hearing the name of this anti-aircraft gun.

▶ Midshipmen gain practical shipboard experience by means of day-long cruises aboard YP patrol boats. Aboard these, which give many a midshipman his first taste of life on the water, the men stand watches, take sights, run through general quarters, fire, and lifeboat drills — yes, and feel those first gruesome pangs of seasickness, as the vessels stand down New York harbor and out to sea.

Trips to the New York Navy Yard afford further instruction to these Naval officer candidates; an hour aboard a new destroyer can often teach them more than a day with a textbook. Similar visits are made to the Sperry Gyroscope Company, and to the Hayden Planetarium, where illustrated lectures are helpful in giving them background for their navigation work.

Adding still more to the midshipmen's specialized knowledge of modern warfare are talks by such men as Lt. Comdr. Bulkeley, on PT Boat duty. Through lectures by men outstanding in the fields, the V-7 trainees get the inside story on the amphibious forces, mine warfare, bomb disposal, and other lesser known services.

▶ When the Midshipmen's School aboard the *Prairie State* was first established, it boasted a staff of 26 officers. Now the school has 350, many of them graduates of the school. For keeping its instruction up-to-the-minute, the school has instituted a training program for its instructors. In rotation, the men are assigned to temporary sea duty, or to gunnery school, or to the Navy Yard — discovering in two or three weeks of practical experience new material to pass on to the school's midshipmen.

For the V-7 trainees, the day begins at 6:10 and, by 10:00 p.m., when taps sounds, they are ready for it. Everywhere is the strictest military discipline: the men march to mess, march to classes, march to the drill-field — and then just march! After the first three weeks, midshipmen officers supervise the battalions, companies and platoons. Men rotate as section leaders, so that all learn to give commands properly — and so that their aptitude as officers may be checked. For men who are soon to be naval officers, ready for sea duty, life is of necessity extremely full. What do they learn? Just about everything you can think of, from knot tying to fleet tactics; from shoring up bulkheads to semaphore; from running a range-keeper to breaking down a machine gun; from flag hoists to first aid; from dead reckoning to flying moors; from watch standing to the manual of arms; from solving torpedo problems to rescuing the crew of a crashed plane.

▶ When these men first go to sea — most of them do, upon graduation — they are pretty green. But experience has shown that they possess enough of a naval background to adjust themselves rapidly. Within a month they are playing as vital a rôle as any officer on their ship. And in this speedy acclimation, the Naval Reserve Midshipmen's School has again proved its worth. It is an emergency kind of training that is offered but, in the greatest emergency this country has ever faced, new officers at the rate of over 7000 a year from one school alone are a mighty source of strength against the Axis sea forces. For German submarines, for the Japanese Navy, that news is all bad.

LAKESIDE Y.C. CHOOSES OFFICERS

▶ Flag officers for 1943 were nominated at a meeting of Lakeside Y.C. members of Cleveland, held December 3rd, as follows: Commodore, Oscar Netschke, 1942 vice commodore; vice commodore, George Schaef, 1942 rear commodore; rear commodores, John Parusa and Ralph Sweeney; secretary, Don Droz; treasurer, Frank Herbst; trustees, Paul Gartland, George Schaef, Mel. Vixler, George Webber and Frank Maxon. In the Lakeside Y.C. it is customary to advance the flag officers of the previous year without opposition but there is always a vote for the position of rear commodore.

NEW OFFICERS AT THE CITY ISLAND YACHT CLUB

▶ At the December meeting, the City Island Yacht Club elected the following officers to serve through 1943: Commodore, Critchell Rimington; vice commodore, Carl Buhr; rear commodore, Gustav I. Steffin; fleet surgeon, Dr. Hugh Darby; measurer, Alvin Mason; financial secretary, Arthur Gauss; recording secretary, George Chadwick; treasurer, Theodore Kaufer.

The new officers took office on the first of this year.

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PROGRESS REPORT

This issue is the up-to-date record of the yachting industry's war-time production achievements.

Its background consists of decades of accumulated skill in building boats and engines and equipment.

Its immediate future is based on the need for still more production for the armed forces.

Its peace-time future will be based on a greatly expanded market, and a greater ability to serve it.

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Whose Ocean?

On all the coasts of the Seven Continents today there's scarcely a foot of sand where free children can play in peace.

On every sea of the Seven Seas ships and men are being sent to the bottom by torpedo and gunfire.

In a dozen conquered countries people are starving. American soldiers—*our* soldiers—American women and children—*our own people*, are in concentration camps taking orders from the brutal Japs.

Better drop those rose-colored glasses and look at the facts!

A desperate struggle is ahead of us. We must outmatch our enemies, plane for plane, ship for ship, and gun for gun, otherwise our own country will take its place on the long list of defeated nations.

Our choice is a simple one. *Fight*—or help those who *are* fighting. *Man* a gun or *pay* for that gun. *Drop* a bomb or *pay* for the bomb. With War Bonds. With every single nickel, dime or dollar we can.

Join the Pay Roll Savings Plan, whoever you are, wherever you work. Set aside at least 10% of your pay every pay day. Each time your savings amount to $18.75, you get a bond, worth $25 in ten years.

That's the way we *Americans* will do it. We won't sit back indifferent.

We won't "wait and see" until there's nothing left to see.

"Do it now" is a good American slogan. So let's *do* it!

It's later than you think!

DO YOU KNOW?

- **When you buy WAR BONDS, you're saving, not giving! Series E WAR BONDS are worth 33⅓ percent more in 10 years! You get back $4 for every $3 you invest!**
- **These BONDS, when held to maturity (10 years), yield 2.9 percent per year on your investment, compounded semiannually!**
- **Joining a Pay Roll Savings Plan makes savings easy!**
- **Joining your bank's Victory Club (it works like any Thrift or Christmas Club) is a convenient way to save for War Bonds for those who aren't members of a Pay Roll Savings Plan.**
- **You can have enough money to do a lot of things you'd like to do, and to buy the many things you'll need after the war is over, if you save enough in War Bonds every pay day NOW!**
- **You can start buying WAR BONDS by buying War Stamps for as little as 10 cents.**

EVERYBODY EVERY PAYDAY AT LEAST 10%

EVERYBODY EVERY PAY DAY **10% in War Bonds**

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With the ARMY-NAVY "E" Flag we are flying the Minute Man Flag, for buying War Bonds and Stamps. Let's *all* keep on buying, for all we're worth, to keep Old Glory flying high over the Seven Seas.

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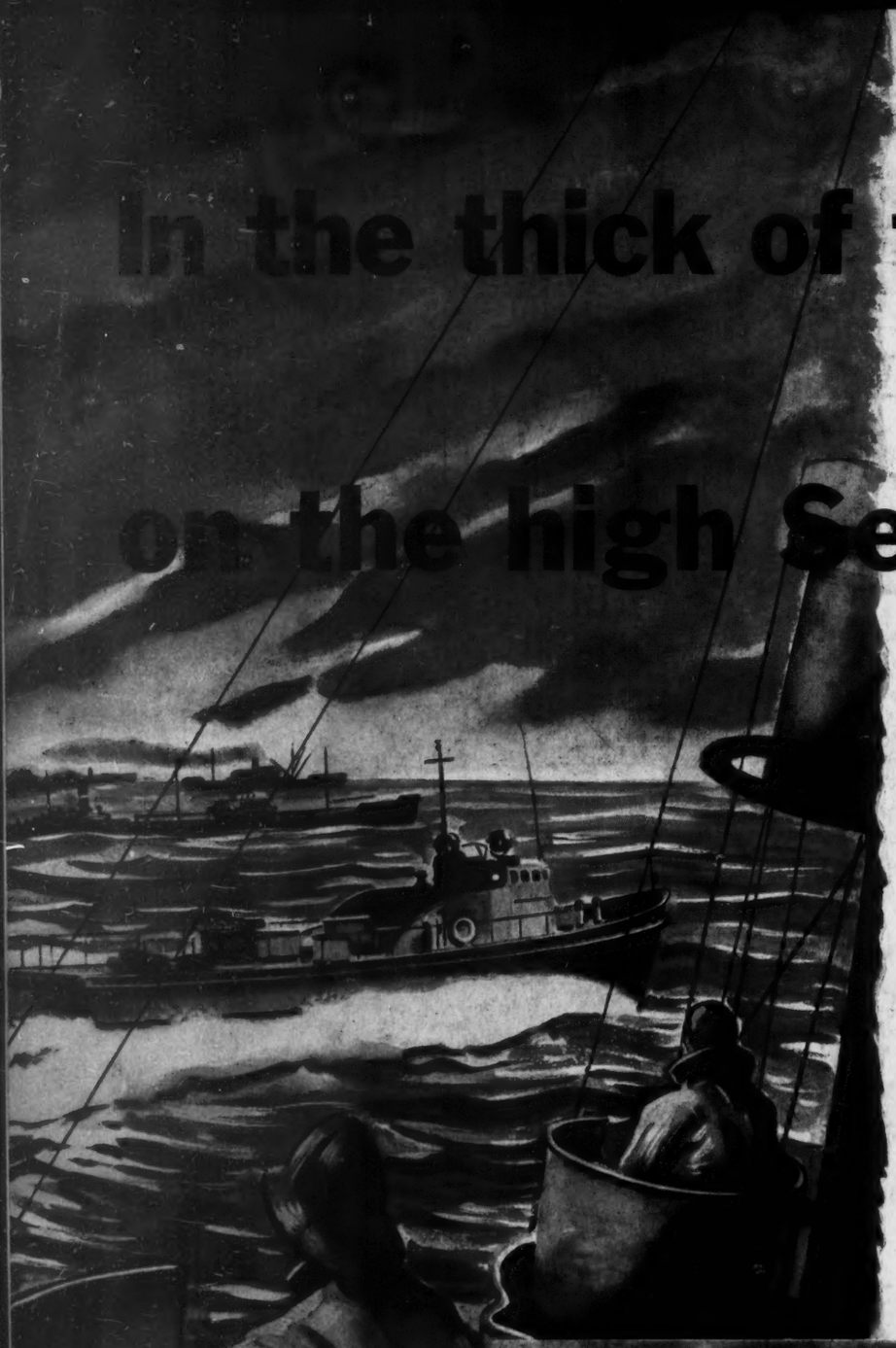

In the thick of the FIGHT on the high seas

It's no military secret that the wartime Coast Guard has outgrown its peacetime name.

A Coast Guard vessel was one of the first U. S. warships sunk by the enemy after war was declared. Today and every day "CG" patrol boats go looking for trouble on convoy and sub hunting assignments. They're in the thick of the fight on the high seas.

Sterling engines are used in a great many Coast Guard craft—patrol boats, picket boats, rescue boats. Because these engines are in the thick of the fighting, we're getting invaluable performance reports. How do they stand up under unusual punishment? How are war-inspired design improvements being translated into *extra* speed and power? How are these engines proving their seaworthiness on the high seas?

The reports are coming in. And they're good. You'll see the results in improved engine design and performance after the war.

and on the home front

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